EFFECTIVENESS OF AUDIO DRAMA ON MENSTRUAL HYGIENE AND MANAGEMENT OF MINOR AILMENTS OF MENSTRUATION UPON KNOWLEDGE AND PRACTICE AMONG VISUALLY CHALLENGED GIRLS

BY

JEYANTHI. P

A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THEREQUIREMENTS FOR THE DEGREE OF MASTEROF SCIENCE IN NURSING

OCTOBER 2017

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Approved by the Dissertation Committee on : _____

Research Guide : _____

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OCTOBER 2017

DECLARATION

I hereby declare that the present dissertation entitled **"Effectiveness of Audio Drama on Menstrual Hygiene and Management of Minor Ailments of Menstruation Upon Knowledge and Practice Among Visually Challenged Girls"** is the outcome of the original research work undertaken and carried out by me under the guidance of **Dr. Latha Venkatesan, M.Sc (N)., M.Phil (N)., Ph.D (N)., Ph.D (HDFS)., M.B.A. (HM),** Principal cum Professor , Apollo College of Nursing and **Mrs. V. Dhanalakshmi, M.Sc (N).**, Reader, Department of Obstetrics and Gynaecological Nursing, Apollo College of Nursing, Chennai.

I also declare that the material of this has not found in any way, the basis for the award of any degree or diploma in this university or any other university.

Jeyanthi. P

M.Sc (N) II Year

ACKNOWLEDGEMENT

I thank **God Almighty** for showering his everlasting love and blessings upon me and guidance in the matters at hand and for clearly showing me the way to conduct my work with a spirit of joy and enthusiasm throughout my study.

I dedicate my heartfelt thanks and gratitude to our esteemed leader **Dr. Latha Venkatesan**, **M.Sc (N)., M.Phil (N)., Ph.D (N)., Ph.D (HDFS)., M.B.A (HM).,** Principal, Apollo College of Nursing for her tremendous help, continuous support, enormous auspice, valuable suggestions, enlightening ideas and tireless motivation to carry out my study successfully.

I extend my earnest gratitude to **Dr. Lizy Sonia. A, M.Sc (N)., Ph.D (N).,** Vice-principal and Head of Medical Surgical Nursing Department, Apollo College of Nursing, for her elegant direction, encouragement and timely help.

With special reference I thank **Dr.Gowri Meena. S, MD (OG)., DNB (OG)., CIMP., MRCOG (UK),** Laparoscopic Surgeon, Infertility Specialist, Consultant, Obstetrician and Gynaecologist, Apollo Speciality Hospitals, Vanagaram, Chennai, for her elegant direction and worth full suggestions for performing the study.

My sincere thanks to **Mrs. Dhanalakshmi. V, M.Sc (N).,** Reader, Department of Obstetrics and Gynaecological Nursing for her valuable suggestions, efficient guidance and profound support throughout the study, the success of this work is credited to her.

I owe my special thanks to **Dr. Vijaya Lakshmi. K, M.Sc (N)., M.A (Psy)., M.B.A., Ph.D (N).,** Research Coordinator, Apollo College of Nursing for her prolonged patience and continuous guidance in completing my study.

I profoundly thank **Sr. Margaret Sulojana Bai,** Headmistress, Little Flower Convent Hr.Sec. School for the Visually Impaired, for permitting me to conduct my study in their esteemed school and providing continuous encouragement throughout the study. I express my deep sense of gratitude to all my participants in this study for their incredible cooperation.

I would like to specially thank **Mrs. Helan. M, M.Sc (N)., M.B.A.,** Reader, Department of Community Health Nursing and **Mrs. Pandiselvi. R, M.Sc (N)** Lecturer, Department of Obstetrics and Gynaecological Nursing for the sponsorship in preparing my braille questionnaire tool and her guidance and profound support throughout the study. I thank all the **experts** for validating my tool and offering worthy suggestions to make it effective.

I also extend my special thanks to the entire **Faculty in the Department of Obstetrics and Gynaecological Nursing, Head of all the Departments and Faculty** for rendering their valuable guidance and ideas in completing my study.

I would fail in my duty if I forget to thank my loved ones behind the scene. I am grateful to my husband **Mr. D. Antony Raj** for helping me to pursue my academic interest and supporting me. I honestly express my gratitude to my parents, **Mr. S. Perumal Raj and Mrs. P. Latha Mary** and my brother **Mr. Immanuel Raja** for their support in all times of ups and downs, their prayers, their blessings and their help rendered to me in completing my study successfully.

My genuine thanks to my **classmates** for being available and their help whenever I needed them. I thank all those who have supported me in prayer and those who have helped me even in a small way to successfully complete this study.

SYNOPSIS

Statement of the Problem

An Experimental Study to Assess the Effectiveness of Audio Drama on Menstrual Hygiene and Management of Minor Ailments of Menstruation Upon Knowledge and Practice Among Visually Challenged Girls in Selected Schools, Chennai.

The Objectives of this Study are,

1. To assess the level of knowledge and practice upon menstrual hygiene and management of minor ailments of menstruation among control and experimental group of visually challenged girls.
2. To determine the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation by comparing the pretest and posttest knowledge and practice among control and experimental group of visually challenged girls.
3. To assess the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation among experimental group of visually challenged girls.
4. To associate the pretest and posttest of knowledge and practice on menstrual hygiene and management of minor ailments of menstruation with selected demographic variables and menstrual variables of experimental group of visually challenged girls.
5. To find out the correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.

The conceptual framework of present study was based on Modified Herzberg Motivation Theory (1959). The study variables were the audio drama, knowledge and practice of menstrual hygiene and management of minor ailments of menstruation among visually challenged girls. The null hypotheses were formulated for the study.

An extensive review of literature and guidance by the experts laid the foundation for the development of demographic variable proforma, menstrual variable proforma, Braille structured questionnaire on knowledge of menstrual hygiene and management of minor ailments of menstruation, Non observational check list on practice of menstrual hygiene and rating scale on the level of satisfaction of the audio drama on menstrual hygiene and management of minor ailments of menstruation.The data collection tools were validated and reliability was established. After confirming the feasibility through the pilot study, the data for the main study was collected. The collected data was tabulated and analyzed using appropriate descriptive and inferential statistics.

A true experimental study was conducted to achieve the objectives of the study. The present study was conducted in Little Flower Convent Hr.Sec. School for Visually Impaired, Nungambakkam Chennai. The study samples were visually challenged girls who were selected through total enumerative sampling.

The level of knowledge and practice of the menstrual hygiene and management of minor ailments of menstruation was assessed for the control and experimental group of visually challenged girls. Audio drama on menstrual hygiene and management of minor ailments of menstruation was given to experimental group for 3 times at the interval of one day. The level of knowledge and practice on the menstrual hygiene and management of minor ailments of menstruation was assessed for two consecutive periods for students at

7th day and an interval of one month after audio drama. The level of satisfaction on Audio drama on menstrual hygiene and management of minor ailments of menstruation was rated one month after intervention. The data was analyzed using descriptive statistics such as mean and standard deviation and inferential statistics such as paired and unpaired t-test, Chi- square test and Karl Pearson's coefficient correlation test.

The Major Findings of the Study

- Majority of the visually challenged girls were 14 years old (56.67 %, 60 %) and Hindus (63.33 %, 60 %). Half of them were studying 8th std and half of them were studying 9th std (50 %, 50 %), all of them were residing in urban area (100 %, 100 %) and the majority of visually challenged girls have family monthly income was above 10000 (83.33%, 76.67 %). in control and experimental group respectively. there was no significant difference between control and experimental group with regard to demographic variables, indicating the homogeneity of the groups respectively.
- Menstrual Variables reveals that half of the students of visually challenged girls was attained menarche between the age of 12-14 years (50 %, 50 %) and half of the students was attained menarche between the age of 15-16 years (50 %, 50 %). All of them had a previous knowledge about menstruation (100%, 100%) and the source of information was their parents (100%, 100%), most of the students had irregular menstruation (76.67%, 73.33 %), and their duration of menstrual cycle was above 30 days (76.67%, 73.33 %), less than half of the students had between 5-7days menstrual flow (46.67%, 43.33%), All of them had minor disorders during menstruation (100%, 100%), Most of them had the experience of dysmenorrhea

(63.33%, 63.33%) and back pain (70%, 63.33%) in control and experimental groups respectively. There was no significant difference between control and experimental group with regard to clinical variables, indicating the homogeneity of the groups respectively.

- Study findings revealed that around half of them had moderate knowledge (53.33, 46.67%) and half of them had inadequate knowledge (46.67, 53.33%) in pretest in control and experimental group of students. However, in the experimental group, most of the students had moderate knowledge (70%) and 30 % had adequate knowledge in posttest I and had moderate (76.67%) and adequate knowledge (23.33%) in posttest II after audio drama.
- The present study findings revealed that majority of them had poor menstrual hygiene practice (63.33, 57.67%) before audio drama in the control and the experimental groups. Whereas in the experimental group all the students showed good menstrual hygiene practice in posttest I (100%) and posttest II (100%).
- In this study the difference in mean and standard deviation of knowledge in control group between pretest vs posttest I (M=9.83, 9.77 SD=1.54,1.52), pretest vs posttest II (M=9.83, 9.77 SD=1.54,1.52) and posttest I vs posttest II (M=9.77, 9.77 SD=1.52,1.52) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation of knowledge between pretest vs posttest I (M=9.73, 18.13 SD=1.59, 1.45) and pretest vs posttest II (M=9.73, 18 SD=1.59, 1.34) was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 1$ “There will be no significant difference between pretest and posttest level of knowledge before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls”

was rejected. When the posttest I and posttest II (M=18.13,18 SD=1.45, 1.34) were compared in the experimental group, there was no statistically significant difference indicating the retention of knowledge even after the interval of one month.

- The difference in mean and standard deviation of practice in the control group between pretest vs posttest I (M=5.3, 5.4 SD= 1.0, 1.1), pretest vs posttest II (M=5.3, 5.4 SD= 1.0, 1.1) and posttest I vs posttest II (M=5.4, 5.4 SD= 1.1, 1.1) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation between pretest vs posttest I (M=5.31, 13.4 SD= 1.03, 0.48) and pretest vs posttest II (M=5.31, 13.13 SD= 1.03, 2.36) was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 2$ "There will be no significant difference in pretest and posttest level of practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" was rejected. When the posttest I and posttest II (M=13.4, 13.13 SD= 0.48, 2.36) were compared in the experimental group, there was no statistically significant difference indicating the retention of practice level even after the interval of one month.
- The study findings revealed that the mean score of pretest level of knowledge had no difference between control and experimental group of visually challenged girls. In posttest I and II, the knowledge of experimental group had higher mean score (M=18.13, 18) in comparison with the control group (M= 9.77, 9.77). The difference was statistically significant ($p<0.001$). Hence the null hypothesis $H_0 1$ was rejected.
- The findings of the study explained that the pretest practice of control and experimental group had no difference in mean score. In posttest I and II, the practice of experimental group had higher mean score (M=13.4, 13.13) in comparison with

the control group (M= 5.4, 5.4). The difference was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 2$ was rejected.

- The investigator found that the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation shows that 80% were satisfied and 20% were highly satisfied with the researcher and audio drama on menstruation and management of minor ailments of menstruation among visually challenged girls. The finding indicated as harmless, compact and economic and also very easy to follow. The above findings give a clear picture that everyone can benefit through audio drama method.
- The study findings indicate that there was no significant association between the selected demographic variables and level of knowledge and practice among visually challenged girls. Hence the null hypothesis $H_0 3$ "There will be no significant association between demographic variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" was retained.
- The study findings observed that there was no significant association between the selected menstrual variables and level of knowledge and practice. Hence the null hypothesis $H_0 4$ "There will be no significant association between menstrual variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" was retained.
- The findings depict that a low positive correlation (0.24) between knowledge and practice of menstrual hygiene and management of minor ailments of menstruation in pretest, posttest I and posttest II (r= 0.20, r=0.24, r=0.25) respectively in the

experimental group of visually challenged girls. Hence the null hypothesis $H_0$5 stated that there will be no significant correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in pretest and posttest of experimental group of visually challenged girls was rejected.

Recommendations

- A study can be conducted to assess the prevalence of reproductive tract infection in visually challenged girls.
- A comparative study can be done among urban and rural visually challenged girls about menstrual hygiene practice.
- The study can be conducted in the other age group with visual impairment.
- The study can be conducted in the other settings like schools, SOS village etc.

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APPENDIX I

LETTER SEEKING PERMISSION TO CONDUCT THE STUDY

Apollo College of Nursing
(Recognised by the Indian Nursing Council and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)

19/08/16

CO/0197/16 **18.08.2016**

To

The Head Master,
Little Flower Convent / LFC
No. 4, G N Road
Poonamallee
Chennai.

Respected Madam,

Sub: To request permission for research study- Reg

Greeting!! As a part of the curriculum requirement our 2nd year M.Sc (N) student Ms.Jeyanthi.P has selected the following title for her research study.

"A Study to Assess the Effectiveness of Audio Drama on the Knowledge and Practice of Menstrual hygiene and Management of Minor ailments of Menstruation among visually challenged girls".

So I kindly request your good selves to permit her to conduct study in your esteemed hospital.

Thanking you,

Dr.LATHA VENKATESAN
PRINCIPAL

Permitted on 24th August 2016

19/08/16
HEADMISTRESS
Little Flower Convent
Hr. Sec. School for the Blind
4, G. N. Road,
Chennai - 600 006.

IS/ISO 9001:2000
Vanagaram to Ambattur Main Road, Ayanambakkam, Chennai - 600 095.
Ph. : 044 - 2653 4387 Tele fax : 044 - 2653 4923 / 044- 2653 4386

APPENDIX II

ETHICAL COMMITTEE CLEARENCE LETTER

Institutional Ethics Committee - Clinical Studies

Reg.No.: ECR/37/Inst/TN/2013

Apollo HOSPITALS TOUCHING LIVES

25 Nov 2016

To,
Ms. P. Jeyanthi,
First year, M.Sc. (Nursing),
Department of Maternal Health Nursing,
Apollo College of Nursing, Chennai.

Ref: An experimental study to assess the effectiveness of audio drama on knowledge and practice upon menstrual hygiene and management of minor ailments of menstruation among visually challenged girls in selected schools, Chennai

Sub: Approval of the above referenced project and its related documents.

Dear Ms. Jeyanthi,

The Institutional Ethics Committee-Clinical Studies has received the following document submitted by you related to the conduct of the above-referenced study -

- Project Proposal

The Institutional Ethics Committee-Clinical Studies reviewed and discussed the project proposal documents submitted by you at a meeting held on 22 November 2016.

The following Institutional Ethics Committee – Clinical Studies members were present at the meeting held on 22nd Nov 2016 at 3.30 PM at, Apollo Research & Innovations, Conference Hall, Room No: 19, 2nd Floor, Krishnadeep Chambers, (Apollo Hospitals, Annex No: 1), Wallace Garden, Chennai – 600006

S. No	Name	Gender	Designation	Affiliation	Position in the committee
1	Dr. Rema Menon	F	Blood Bank Transfusion Services	Apollo Hospitals, Chennai	Member Secretary
2	Dr. Pradeep Kumar	M	Pharmacologist	Apollo Hospitals, Chennai	Pharmacologist
3	Ms. Maimoona Badsha	F	Lawyer	Independent legal Practitioner, Chennai	Lawyer
4	Mrs. Malathy Chandrasekhar	F	Home based teacher	Freelance	Layperson
5	Dr. K. Sathyamurthi	M	Asst. Professor	Madras School of Social work, Chennai	Social Scientist

Apollo Hospitals Enterprise Limited,
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E-mail : ecapollochennai@gmail.com

Institutional Ethics Committee - Clinical Studies

Reg.No.: ECR/37/Inst/TN/2013

Apollo HOSPITALS
TOUCHING LIVES

The Institutional Ethics Committee-Clinical Studies reviewed the proposal, its methodology and design of the study. The proposed thesis work is approved in the presented form without any modifications.

The Institutional Ethics Committee-Clinical Studies review and approval of the report is only to meet their academic requirement and will not amount to any approval of the conclusion / recommendations as conclusive, deserving adoption and implementations, in any form, in any health care institution.

The Institutional Ethics Committee-Clinical Studies is constituted and works as per ICH-GCP, ICMR and revised Schedule Y guidelines.

Regards,

Date: 25/11/2016

Dr. Rema Menon,
Member Secretary,
Institutional Ethics Committee-Clinical Studies,
Apollo Hospitals,
Chennai.

MEMBER SECRETARY
INSTITUTIONAL ETHICS COMMITTEE CLINICAL STUDIES
APOLLO HOSPITALS, AHEL
CHENNAI, TAMILNADU.

Apollo Hospitals Enterprise Limited,
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E-mail : ecapollochennai@gmail.com

APPENDIX III

LETTER SEEKING PERMISSION FOR CONTENT VALIDITY

From

Ms. Jeyanthi.P

M.Sc. (Nursing) Second Year,

Apollo College of Nursing, Chennai – 600 095.

To

Forwarded Through:

Dr. LathaVenkatesan,

Principal,

Apollo College of Nursing. Chennai – 600 095.

Sub: Requesting for opinions and suggestions of experts for establishing content validity for research tool.

Respected Madam,

Greetings! As a part of the curriculum requirement the following research title is selected for them study.

"An experimental study to assess the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation upon knowledge and practice among visually challenged girls in selected schools, Chennai".

I will be privileged to have your valuable suggestions with regards to the establishment of content validity of the research tool. I kindly request you to validate my research tool and give suggestions about the same. I would be highly obliged and remain thankful for your great help for validating my tool.

Thanking you,

Date: **Yours sincerely,**

Place: **Jeyanthi.P**

APPENDIX IV

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr. LathaVenkatesan,**
   M.Sc (N), M.Phil (N)., Ph.D (N)., Ph.D (HDFS)., M.B.A (HM).,
   Principal and HOD of Obstetrics and Gynaecological Nursing,
   Apollo College of Nursing,
   Chennai- 600 095.

2. **Dr. Lizy Sonia. A, M.Sc (N)., Ph.D (N).,**
   Vice Principal and HOD of Medical Surgical Nursing,
   Apollo College of Nursing,
   Chennai-600 095.

3. **Dr. Gowri Meena. S,**
   MD (OG)., DNB (OG)., CIMP., MRCOG (UK).,
   Laparoscopic Surgeon, Infertility Specialist,
   Consultant, Obstetrician and Gynaecologist,
   Apollo speciality Hospitals,
   Vanagaram, Chennai-600 095.

4. **Dr. Vijayalakshmi. K, M.Sc (N)., Ph.D (N)., M.A (Psy).,**
   Professor in Psychiatric Nursing,
   Apollo College of Nursing,
   Chennai- 600 095.

5. **Mrs. Saraswathy. K, M.Sc (N).,**
   Lecturer in Obstetrics and Gynaecological Nursing,
   Apollo College of Nursing,
   Chennai- 600 095.

6. Ms. Urmila. U, M.Sc (N).,
Lecturer in Obstetrics and Gynaecological Nursing,
Apollo College of Nursing,
Chennai- 600 095.

7. Mrs. Pandiselvi. R, M.Sc (N).,
Lecturer in Obstetrics and Gynaecological Nursing,
Apollo College of Nursing,
Chennai- 600 095.

8. Mrs. Irin Anitha. M, M.Sc (N).,
Tutor in Obstetrics and Gynaecological Nursing,
Apollo College of Nursing,
Chennai- 600 095.

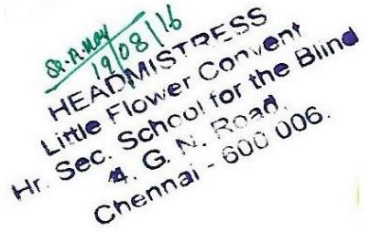
APPENDIX V

CERTIFICATE FOR CONTENT VALIDITY

CERTIFICATE FOR CONTENT VALIDITY

TO WHOMSOEVER IT MAY CONCERN

This is to certify that tools and content for the research study developed by II year M.Sc (Nursing) student of Apollo College of Nursing for her dissertation "**An experimental study to assess the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation upon knowledge and practice among visually challenged girls in selected schools, Chennai.**" was validated.



Signature of the Expert

Name and Designation

APPENDIX VI

RESEARCH PARTICIPANT CONSENT FORM

Dear participant,

I am a M.Sc. (N) student of Apollo College of Nursing, Chennai. As a part of my study, a research on **"An Experimental Study to Assess the Effectiveness of Audio Drama on Menstrual Hygiene and Management of Minor Ailments of Menstruation upon Knowledge and Practice among Visually Challenged Girls in Selected Schools, Chennai."** is selected to be conducted. The finding of the study will be helpful in implementing audio drama for the visually challenged girls to improve the knowledge and practice on menstrual hygiene and management of minor ailments of menstruation.

I hereby seek your consent and co-operation to participate in the study. Please be frank & honest in your responses. The information collected will be kept confidential and anonymity will be obtained.

Signature of the Investigator

I……..…. hereby consent to participate in the study.

Place:

Date: **Signature of Participant**

APPENDIX VII

CERTIFICATE FOR ENGLISH EDITING

CERTIFICATE FOR ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation **"An experimental study to assess the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation upon knowledge and practice among visually challenged girls in selected schools, Chennai."** by Ms. Jeyanthi, M.Sc(N) student, Apollo College of Nursing, was edited for English language appropriateness

Prof. J.L. NARASIMHAN
New No.8, Second Main Road,
Block B - F1, Krishna Nagar,
Chromepet, Chennai-600 044.
Cell : 94446 54720
e-mail : profjln@yahoo.com

Signature of the Expert

Name and Designation

APPENDIX VIII

PLAGIARISM DETECTOR ORIGINALITY REPORT

	Plagiarism Detector - Originality Report
	Plagiarism Detector Project: [http://plagiarism-detector.com] Application core version:557

Originality report details:	
Generation Time and Date:	13/7/2017 12:30:15 AM
Document Name:	JEYANTHI THESIS.docx
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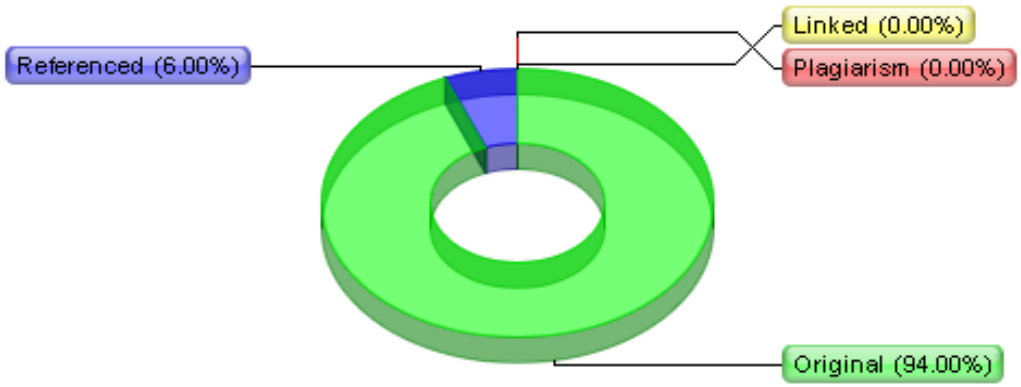

Referenced 6% / Linked 0%

Original - 94% / 0% - Plagiarism

Important Hint: to understand what exactly is meant by any report value - you can click . It will navigate you to the most detailed explanation at our web site.

APPENDIX IX

DEMOGRAPHIC VARIABLE PROFORMA

Purpose

This proforma is used to measures the demographic variable such as age, religion education, standard of education, area of residence.

Instruction

Please answer the following questions. Please be frank and free in answering questions. The collected information will be kept confidential and anonymity.

1. **Age** ☐
2. **Religion**
   - 2.1. Hindu ☐
   - 2.2. Christian
   - 2.3. Muslim
3. **Standard of education**
   - 3.1. 8th standard ☐
   - 3.2. 9th standard
4. **Monthly income of the family** ☐
   - 4.1. Less than 3000
   - 4.2. 3000 – 6000
   - 4.3. 6000 – 10000
   - 4.4. Greater than 10000
5. **Area of residence** ☐
   - 5.1. Urban
   - 5.2. Rural
   - 5.3. Sub-Urban

APPENDIX X

MENSTRUAL VARIABLE PROFORMA

Purpose

This proforma is used to measures the menstrual variable such as age of menarche, Previous knowledge of menstruation, source of information, religion education, regular menstruation, Duration of menstrual cycle, days of menstrual flow, dysmenorrhea and discomfort during menstruation.

Instruction

Please answer the following questions. Please be frank and free in answering questions. The collected information will be kept confidential and anonymity.

Sample Number: ……

1. **Age at menarche** ☐
   - 1.1. 2 – 14 years
   - 1.2. 15 – 16 years
   - 1.3. Above 16 years
2. **Do you have the knowledge of menstruation?** ☐
   - 2.1. Yes
   - 2.2. No
3. **If yes, what was the source of information?** ☐
   - 3.1. Parents
   - 3.2. Teachers
   - 3.3. Friends or elders

3.4. Mass media (T.V, Radio)

3.5. Others (Specify)

4. **Do you have regular menstruation?**

   4.1. Yes

   4.2. No

5. **Duration of menstrual cycle?**

   5.1. Below 28 days cycle

   5.2. 28 – 30 days cycle

   5.3. Above 30 days cycle

6. **How many days do you have your menstrual flow?**

   6.1. less than 3 days

   6.2. 3 – 5 days

   6.3. 6 – 7 days

   6.4. Greater than 7 days

7. **Do you have the experience of pain during menstruation?**

   7.1. Yes

   7.2. No

8. **Any other discomfort during menstruation?**

   8.1. Yes

   8.2. No

9. **If yes, what type of discomfort? specify.**

   9.1. ----------

BLUE PRINT ON STRUCTURED QUESTIONAIRE TO ASSESS KNOWLEDGE OF MENSTRUAL HYGIENE AND MANAGEMENT OF MINOR AILMENTS OF MENSTRUATION AMONG VISUALLY CHALLENGED GIRLS

S.NO.	QUESTIONS	ITEMS NO.	TOTAL NUMBER OF ITEMS	PERCENTAGE
1.	Questions related to Anatomy and Physiology of Reproductive organ	1, 2, 3	3	12
2.	Questions related to Menstruation	4, 5, 6, 7, 8, 9	6	24
3.	Questions related to Management of Minor Ailments of Menstruation	10, 11, 12, 13, 14, 15, 16	7	28
4.	Questions for Menstrual Hygiene	17, 18, 19, 20, 21, 22, 23, 24, 25	9	36
TOTAL			**25**	**100**

Score Interpretation

Scoring	Percentage	Interpretation
1 – 8	< 50	Inadequate Knowledge
9 – 16	50 – 75	Moderate Knowledge
17 – 25	>75	Adequate Knowledge

APPENDIX XI

BRAILLE METHOD STRUCTURED QUESTIONNAIRE ON KNOWLEDGE OF MENSTRUAL HYGIENE AND MANAGEMENT OF MINOR AILMENTS OF MENSTRUATION

Purpose

This structured questionnaire is used to assess the knowledge of menstrual hygiene and management of minor ailments of menstruation.

Instruction

Read the question carefully which includes 3 options and answer the correct option for each question to the researcher. Total numbers of questions are 25. Each correct option is scored 1. This information will be kept confidential and anonymity will be maintained.

Anatomy and Physiology of Reproductive Organ

1. **The female reproductive organ is**
    a. Kidney
    b. Uterus
    c. Ureters
2. **Ovum is matured from**
    a. Ovary
    b. Uterus
    c. Fallopian tube
3. **The number of ovum released in every month**
    a. Two
    b. One
    c. Three

Menstrual Cycle

4. **The process of release of ovum from the ovary is called**
    a. Menstruation
    b. Ovulation
    c. Menarche
5. **Menarche means**
    a. First menstruation
    b. Delayed menstruation
    c. Painful menstruation
6. **The menarche occurs between the age of**
    a. 8 – 12 years
    b. 9 – 15 years
    c. 15 – 17 years
7. **One menstrual cycle consists of**
    a. 22 – 24 days
    b. 24 – 28 days
    c. 28 – 30 days
8. **Duration of normal menstrual cycle**
    a. 1 – 3 days
    b. 4 – 7 days
    c. 8 – 11 days
9. **Average blood loss during menstruation**
    a. 20 – 30 ml
    b. 30 – 40 ml
    c. 40 – 50 ml

Management of Minor Ailments of Menstruation

10. The following symptoms do women commonly experience during the menstrual cycle

a. Stomach ache

b. Indigestion

c. Throat pain

11. The Measure used to relieve a pain during menstruation

a. Luke warm water application

b. Warm water application

c. Cold water application

12. Home remedy which is used for painful menstruation

a. Drinking cold water

b. Ginger tea

c. Coffee

13. The Measure helps to relieve from pain in breast during menstruation

a. Self-medication, rest

b. Wearing supportive bra, low salt diet,

c. Less intake of food, self-medication

14. Oligomenorrhoea means

a. The menses with the interval of 1 – 28 days

b. The menses with the interval of 28 – 35 days

c. The menses with the interval of > 35 days

15. Polymenorhhoea means

a. Cycle with less than 21 days

b. Cycle 21 – 28 days

c. Cycle with 28 – 35 days

16. During menstruation a girl needs

a. Liquid diet

b. Solid diet

c. Well balanced diet

Menstrual Hygiene

17. The main purpose of menstrual hygiene

a. To stay away from infections and General comfort

b. To Improve Mobility

c. To improve menstrual problems

18. The best method used to absorb the menstrual blood

a. Sanitary pads

b. Old cloths

c. Tissue paper

19. The sanitary pad or cloth should be changed

a. Every 4 hours

b. Every 2 hours

c. Every 1 hour

20. Pads can be disposed

a. By throwing out in open spaces

b. By wrapping and disposing into a waste bin

c. By Disposing directly into a latrine

21. Cloths should be dry out in the

a. Sunlight

b. Dark room

c. Bathroom

22. The material which is used for cleaning of External genitalia

a. Luke warm water

b. Soap and water

c. Antiseptics solution

23. Perineal care is cleaned from

a. Front to back

b. Back to front

c. Side to side

24. The best method of hand hygiene during menstruation is using

a. Antiseptic solution

b. Tap water

c. Hot water

25. Bath pattern during menstruation

a. Only body bath

b. No bath

c. Head and body bath daily

BLUE PRINT ON NON- OBSERVATIONAL CHECKLIST TO ASSESS THE PRACTISE OF MENSTRUAL HYGIENE AND MANAGEMENT OF MINOR AILMENTS OF MENSTRUATION AMONG VISUALLY CHALLENGED GIRLS

S.NO.	QUESTIONS	ITEMS NO	TOTAL NUMBER OF ITEMS	PERCENTAGE
1.	Questions related to Hygiene Practice	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	11	68.75
2.	Questions related to Cloth used as an Absorbent	12, 13, 14, 15, 16	5	31.25
TOTAL			**16**	**100**
1.	Questions related to Hygiene Practice	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	11	73.33
2.	Questions related to Sanitary pad used as an Absorbent	17, 18, 19, 20	4	26.66
TOTAL			**15**	**100**

Score Interpretation

Scoring	**Percentage**	**Interpretation**
1 – 5	< 50%	Poor Practice
6 – 10	50% – 75 %	Average Practice
11 - 15	>75% %	Good Practice

APPENDIX XII

NON- OBSERVATIONAL CHECKLIST FOR PRACTISE OF MENSTRUAL HYGIENE AND MANAGEMENT OF MINOR AILMENTS OF MENSTRUATION

Purpose

This checklist provides information regarding the practice of menstrual hygiene and management of minor ailments of menstruation.

Instructions

The researcher collects the following information from the students by asking about their practice. This information will be kept confidential and anonymity will be maintained.

S.No	Parameters	Yes	No
	Hygiene practice		
1.	Bath daily		
2.	Perineal area is kept clean and dry		
3.	Perineal area is washed with soap and water		
4.	Following front to back technique for cleaning perineal area		
5.	Cotton undergarments are used		
6.	Undergarments are washed with soap, Dettol and water		
7.	Changing undergarment more than two times in a day		
8.	Adequate fluid is taken		
9.	Fruits and vegetable are taken		
10.	Salty and spicy foods are avoided		
11.	Mild exercise are performed		

	Cloth used as an absorbent		
12.	Cloths are changed more than 3 times a day		
13.	Cloths are washed with soap and water		
14.	Cloths are dried in sunlight		
15.	Cloths are stored in clean and dry place		
16.	Cloths are changed every 3 months once		
	Sanitary pad used as an absorbent		
17.	Sanitary pads are removed from front to back		
18.	Sanitary pads are changed more than 3 times and above		
19.	Sanitary pads are wrapped before disposal		
20.	Sanitary pads are disposed in separate dustbin		

BLUE PRINT ON RATING SCALE ON LEVEL OF SATISFACTION AUDIO DRAMA ON MENSTRUAL HYGIENE AND MANAGEMENT OF MINOR AILMENTS OF MENSTRUATION AMONG VISUALLY CHALLENGED GIRLS

S.NO.	DOMAINS	ITEMS NO	TOTAL NUMBER OF ITEMS	PERCENTAGE
1.	Related to Researcher	1, 2, 3, 4, 5	5	50
2.	Related to Audio drama	6, 7, 8, 9, 10	5	50

SCORING KEY

Highly Satisfied - 4

Satisfied - 3

Dissatisfied - 2

Highly Dissatisfied - 1

SCORING INTERPRETATION

Score	Percentage	Interpretation
$\geq$ 10	$\geq$ 25	Highly Satisfied
11 – 20	26 – 50	Satisfied
21 – 30	51 – 75	Dissatisfied
31 – 40	76 – 100	Highly Dissatisfied

APPENDIX XIII

RATING SCALE ON LEVEL OF SATISFACTION

Purpose

The rating scale is designed to assess the level of satisfaction of audio drama on menstrual hygiene and management of minor ailments of menstruation.

Instruction

There are 10 items given. Kindly listen carefully the item. Each response extends from highly satisfied to highly dissatisfied. Describe your satisfaction regarding researcher and intervention. Give your responses freely and frankly. The responses will be kept confidential.

Item No.	Statement	Highly Satisfied (4)	Satisfied (3)	Dissatisfied (2)	Highly Dissatisfied (1)
1.	Approach of the researcher was comfortable				
2.	The researcher explanation about the content of audio drama was satisfactory				
3.	The time spent by the researcher was adequate				
4.	The communication of the researcher was adequate				
5.	The technique was easy to follow and understand				
6.	The clarity of audio drama was good				
7.	The duration of teaching was adequate				
8.	The technique was easy to practice				
9.	Gained knowledge regarding menstrual hygiene and management of minor ailments of menstruation				
10.	The session on the whole was effective				

APPENDIX XIV

AUDIO DRAMA SCRIPT ON MENSTRUAL HYGIENE AND MANAGEMENT OF MINOR AILMENTS OF MENSTRUATION

Purpose

It was designed to improve the knowledge and practice on menstrual hygiene and management of minor ailments of menstruation.

Instruction

This content of audio drama was present inside the compact disk. Audio drama was given to experimental group at 3 times (with duration of 20 min) with interval of one day using auditory and kinaesthetic method of teaching by the researcher. Kindly listen the audio drama. Give your responses freely and frankly. The responses will be kept confidential.

Teacher: Good morning children, I have come here to give us all awareness on menstrual hygiene.

Students: Good morning mam

Teacher: Children shall we begin now?

Students: Yes, mam.

Teacher: In nature, every day the sun rises and provides lights. If we plant small seeds water it daily, as days go by, it grows into a big tree. Once it becomes a tree, it provides fruits and flowers. Similarly, a girl child too grows up playing in a cradle. Later she goes to school and gets good education, play with friends and eventually grows up. This is the way of life.

Just as a plant grows into tree, a young girl too becomes a woman. During this time, several changes take place in her body. These changes begin when girls attain puberty. This is the rule of nature and the way in which nature works. This is normal.

Today, let us learn more about menstruation. It is likely that all of you have several doubts and questions related to this topic.

I have come here to clarify your doubts and to impart awareness on how hygiene can be maintained.

Firstly, shall I ask you a question?

Students: Yes, mam.

Teacher: What is the range in age during which girls attain puberty?

Student 1: 12yrs,

Student 2: 13yrs

Student 3: 14yrs

Teacher: Yes, a young girl can attain puberty anywhere between 9 to 16 yrs. It is only during this time she will first notice bleeding from the vagina.

Why the age is in attaining puberty so varied? There are several reasons for this. Normally, 2 ½ years after breast begin to develop, a girl attains puberty.

In some cases, the girl attains puberty at the same age as her mother. In other cases, it depends on the physical development of the girl.

The changes that occur in the body during this time are breast enlargement, increase in hip size, and hair growth in the underarms and above the vagina. These events occur between 10- 16 years of age.

During this time, each month, when the blood is discharged from the body, how much bleeding would be considered as too much? Do you know when should we see a doctor?

Students: Don't know mam.

Teacher: If one has to change more than one pad/ cloth in 1 hour, or if it last for more than 8 days, and if your body feels fatigue and exhaustion, it is better to consult a women's gynecological doctor.

During menstruation, women loose between 40 to 60 ml of blood per month.

Student 1: Mam I got my last period 3-4 month back. It has not happened again. What could have happened? Is there any problem?

Teacher: No, this is not a cause of concern. In the first 2 to 3 years after a girl has attained puberty, menstruation could happen in an irregular manner, and this is normal. Very young girls sometimes have menstruation only 3 to 4 times in a year. So don't worry. It will normalize after a couple of years.

Student 1: Mam, from where the blood is released during menstruation, is it impure blood, is it true?

Teacher: No child that blood is not impure. During menstruation, when pregnancy does not happen, then the unwanted blood along with the inner lining of the uterus is released.

Some girls never menstruate their entire life, yet this is not dangerous to their life. Therefore, it is certainly not bad blood.

Student 2: Mam, if it is not bad blood, then why does it smell?

Teacher: Menstrual blood in itself does not have any bad smell. Menstrual blood also contains the same components as blood in the rest of the body.

But once it comes out of the body, it comes in touch with the cloth/ pad and along with air, chemical reaction take place which causes the bad odor. This can be prevented.

The used cloth or pad must be changed within 4 -6 hours.

Student 3: Mam, during my period, I am experiencing severe stomach ache, back ache and many other body aches. What is the reason for this?

Teacher: Yes, during this time, due to the excessive production of certain chemical hormones, we get such aches and pains. Either 5 to 7 days before a period, or during a period many girls experience stomach ache, stomach cramps, excessive bleeding, back ache, leg pain, irritation, anger, depression and tiredness – this is normal.

The following methods can be employed to bring some relief to the above problems.

The first method is to fill a bottle with warm water, wrap it with a clot, and place it on the area there at aches.

Secondly, by gently massage the aching potion of the stomach. We can reduce stomach ache.

The third is a home remedy. Ginger or cumin herbal drink can be given.

The fourth point is that during menstruation, girls must consume food rich in iron. Especially, those who are anemic should have food such as drumstick leafs, green leafy vegetables, raggi, vegetables, fruits should be given.

Since these have less sugar and more fiber content, they should be consumed in larger quantities. Also the salt intake must be reduced.

Now I have another question for all of you.

How many days should a period last, for it to be considered normal?

Student 1: 5 days …. no. 4 days… 3 days

Teacher: All the answers are correct. Usually, bleeding lasts anywhere between 3 to 7 days and at times, it could vary slightly.

Every girl should be aware of the date when her menstruation is likely to begin, so that you can come prepared beforehand by carrying a sanitary pad in your bag. Isn't it?

So how do you know your expected date of menstruation? Through menstrual cycle. One menstrual cycle is counted from the first day of one period to the first day of very next period. For most women, a menstrual cycle last around 28 days with a lesser cycle of 22 days to the longer cycle of 45 days, thus seeing a variation in many women.

Student 1: Mam, sometimes instead of blood I get some white discharge. What is it?

Teacher: Yes, every woman experiences white discharge a few days before menstruation begins, which is released from the vagina. This is normal. But if this discharge is smelly, discolored or is excessive, then it is best to consult a gynecologist immediately. To avoid such problems women must clean their vagina and surrounding parts daily during bath.

Student 2: Mam, during menstruation, should we use a cloth or a sanitary napkin?

Teacher: You can use any of the two as you prefer. You can use either cloth or pad. But first, let us learn how to use a cloth correctly. A large piece of cotton cloth can be folded multiple times and lined on the undergarment or tied

around the waist. The cloth should be changed 3-4 times a day or more if bleeding is heavy.

Even if the bleeding is less, the cloth must be changed within 6 hours. If not, it could lead to infection.

Now let me tell you, now how to wash and keep the cloth clean. The used cloth must be washed in hot water using soap and dried in bright sunlight. Usually women have the habit of washing and reusing this cloth. But if this cloth is washed using insufficient water or without soap and then dried in the absence of sunlight, then it could lead to skin infection. The cloth you use should not be used by anyone else. The cloth should ideally be discarded once every 2-3 months and new cloth should be used.

Girls who go to school or college, find it difficult to use cloth, and using the same cloth without changing from morning to evening, become difficult staying in school/ college. And this is not hygienic. And for these reasons, school or college going girls find it convenient to use sanitary napkins. Such sanitary napkins are meant for a single use after which they have to be discarded.

A sanitary pad is made of three layers. The bottom layer comes in contact with the undergarment, and is made of plastic. The middle layer has the ability to absorb the blood flow and prevent leakage. The upper layer comes in contact with the body, and helps to keep the skin dry.

I will now tell you how to use a pad. Remove the glued paper from the bottom of the pad, and stick it to the undergarment. One pad must be used for 4 to 6 hours. After that it must be changed.

Student 3: Mam, how should we dispose the used napkin?

Teacher: That's a very good question. Used pads should be wrapped in old paper and thrown into dustbin. These dustbins have to be emptied daily along with other garbage from the house. You must never throw sanitary pads in water bodies, gutters, or in the toilets.

Now let us learn about personal hygiene during menstruation. During menstruation girls must wash their vagina and surrounding areas and keep them clean at all times, else it will result in infection. It could also cause rashes and bad odor. After passing urine, motion or changing the cloth/ pad, you must ensure that your hands are washed. After passing motion, ensure that you wash yourself from front to back to prevent bacterial infections.

Change pads or cloth daily 5-6 times, else bad odor and infection may happen. Used pads should be covered with paper before disposing.

The cloth and undergarment must be changed frequently. Use soap or soap powder and wash thoroughly in hot water. To prevent infection, dry it under sunlight. Dry it only in an open, airy space. You must only use dry undergarments, else rashes, odor, and bacteria build up may happen.

Lastly, it is your responsibility to take care of your body. Eat well, exercise regularly. Now, I hope that you all have got the right answers to your questions. Have you?

Students: Yes mam, Yes madam…….

Teacher: Ok thank you all ……

Students: Thank you mam……

APPENDIX XV

DATA CODE SHEET

Age	**AG**	**Source of information**	**SI**
14 Years	1.1	Parents	3.1
15 Years	1.2	Teachers	3.2
Religion	**RL**	Friends or elders	3.3
Hindu	2.1	Mass media (T.V, Radio)	3.4
Christian	2.2	Others (Specify)	3.5
Muslim	2.3	**Regular menstruation**	**RM**
Standard of education	**ED**	Yes	4.1
8^{th} standard	3.1	No	4.2
9^{th} standard	3.2	**Duration of menstrual cycle**	**DC**
Monthly income of the family	**MI**	Below 28 days cycle	5.1
Less than 3000	4.1	28 – 30 days cycle	5.2
3000 – 6000	4.2	Above 30 days cycle	5.3
6000 – 10000	4.3	**Duration of menstrual flow**	**DM**
Greater than 10000	4.4	less than 3 days	6.1
Area of residence	**RES**	3 – 5 days	6.2
Urban	5.1	6 – 7 days	6.3
Rural	5.2	Greater than 7 days	6.4
Sub-Urban	5.3	**Experience of**	**PM**
Age at menarche	**AM**	**pain during menstruation**	
12 – 14 years	1.1	Yes	7.1
15 – 16 years	1.2	No	7.2
Above 16 years	1.3	**Discomfort during menstruation**	**MD**
Knowledge of menstruation	**KM**	Yes	8.1
Yes	2.1	No	8.2
No	2.2	**Type of discomfort**	**DS**

CHAPTER I

INTRODUCTION

Background of the study

"To hear a sound is to see a space"

–Lous I Kahn

"Imagine the life one has to live without seeing the beauty of the rising sun, beauty of the blooming flowers and even unable to see the face of his mother". Eyes are the most precious organs in the human body used for viewing the world. So one has to face innumerable difficulties in the absence of vision.

With 7.8 million blind people in India, the country accounts for 20 per cent of the 39 million blind populations across the globe (WHO, 2010).

Little attention has been paid to the menstrual illness experience of visually challenged adolescents in literature. Nevertheless, a large majority of these people reach puberty and sexual maturity, just like so-called normal adolescents. According to common sense, visually challenged people apparently do not experience physical changes and would not correspond to psychosocial changes.

Menstruation is generally considered as unclean in the Indian society. Isolation of the menstruating girls and restrictions being imposed on them in the family, have introduced a negative attitude towards this phenomenon. There is a substantial lacuna in the knowledge relating to menstruation among adolescent girls. Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation. Menstrual hygiene and management will directly contribute to the Millennium Development Goal (MDG)-2 on universal education and MDG -3 on gender equality and women empowerment. (MDG,2013).

The supremacy of adolescents has its effect on issues concerning reproductive health and other issues related to the reproductive system and its functions and processes, even though there are differences by country, culture, ethnic group, social class or family. Most striking is the restricted control, which many girls have over their own mobility and behaviour during menstruation due to their 'impurity' during menstruation, including the myths, misconceptions, superstitions and (cultural and /or religious) taboos concerning menstrual blood and menstrual hygiene. Remarkable is also that the education by parents concerning reproductive health, sexuality and all related issues is considered almost everywhere as a "no-go" area.

In the context of adolescence, physiological changes, sexuality, family, society and impairment are constituent factors of the personal and professional growth process in the search for identity, autonomy and independence. Menstrual hygiene and management can be essential in ensuring everyday life and the life has not interrupted by menstruation. It ensures continuance with daily routine such as going to school, going to work or doing household chores. It can also prevent potential situations of embarrassment and, in turn, induce confidence about self and the body.

Menstrual problems are common, and can be disruptive to a student's daily life and productivity. Dysmenorrhea, premenstrual syndrome and menstrual hygiene are leading contributors to the burden of disease borne by adolescent secondary school girls.

Adolescent girls constitute a vulnerable group not only with respect to their social status but also in relation to their health. Menstruation is regarded unclean or dirty in society. The issue of menstrual hygiene was inadequately acknowledged and has not received proper attention among visually challenged girls. Thus, the consequences of reproductive tract infections are severe and may result in significant negative impact to

adolescent's health including chronic pelvic pain, dysmenorrhea (painful periods) and in severe cases of infertility. Reproductive tract infections, which have become a silent epidemic that devastates adolescent's lives and closely related to poor menstrual hygiene. The practice of good menstrual hygiene reduces the incidence of reproductive tract infection (RTI). In this sense, maintaining proper menstrual hygiene is important for wellbeing and development of healthy reproductive life among visually challenged girls.

Need for the Study

Every year approximately 10 % of women worldwide are exposed to genital infections including urinary tract infections and bacterial vaginosis, and 75 % of women have a history of a genital infection. Specifically, the common risk factors for vaginal infections include pregnancy and poor hygiene (both perineal and menstrual hygiene). (WHO, 2014).

Menstruation, though a natural process, has often been dealt with secrecy in many parts of India. Menstruation is the discharge of blood and tissue that occurs each month as part of a woman's menstrual cycle. This cycle is controlled by hormones produced in both the brain and the ovaries and prepares the reproductive organs for pregnancy. This process takes place once a month during a woman's reproductive years.

Menstruation is also called monthly bleeding, menstrual period, menstrual course and period. The first menstruation usually comes between the ages of nine and sixteen, although it is normal to begin earlier or later. The first menstrual period is called the menarche. The first menstruation may begin before ovulation takes place (and ovulation may take place before the first menstruation). The menstruation flow is quite slow and gradual. The first periods are often very irregular. It is not uncommon to skip a month or to have periods close together. The length of periods varies from two days to a week. Gradually, a regular

cycle will be established; but it is still quite normal and common during the teen years to have irregular periods. A great deal of women's and girls' scant knowledge is informed by peers and female family members.

About 52% of the female population is of reproductive age and most of them are menstruating every month. A majority of them have no access to clean and safe sanitary products, or to a clean and private space in which to change menstrual cloths or pads and to wash. Millions of girls and women are subject to restrictions in their daily lives simply because they are menstruating. Besides the health problems due to poor hygiene during menstruation, the lack or un affordability of facilities and appropriate sanitary products may push menstruating girls temporarily or sometimes permanently out of school, with a negative impact on their right to education.

The best place to make an impact on improving the lives of girls and women is in water and sanitation. The time has come to promote loudly and unashamedly the role of good Menstrual Hygiene Management (MHM) as a trigger for better, stronger development of women and girls: personal, educational and professional. (MDG,2013).

Knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of adolescents. Parameaswari et al. (2013) found in Chennai, Lack of resource was an important problem. In resource poor contexts, where women do not have access to basic facilities such as water, bathroom and privacy, the standard of hygiene one can maintain is severely compromised.

Girls of higher socioeconomic status have better menstrual hygiene practices which subsequently reduce the prevalence of gynaecological problems among them (Mishra, et al., 2016). The girls are being informed about menstruation prior to menarche and

commercial pad was used more common among urban than rural girls. Inappropriate disposal was very common.

Many girls reported missing school during periods. Approximately one third of girls only changed their absorbents in school facilities (Eijk, et al., 2015). Strengthening of importance and need of menstrual health management programs in India and also education on awareness, access to hygienic absorbents and disposal of menstrual health management items need to be addressed.

Visually impaired girl's needs have been so widely and so deeply neglected or not being properly addressed. Hence, specific measures should be taken for maintain the better education on reproductive health among visually impaired. (Kanmani and Ravisankar, 2013).

Braille is important language for reading and writing for the visually impaired. It helps them to understand and visualize the world via touch. Audio aids are being used to impart health education to the visually impaired. Audio aids are useful in being time saving & can be played repeatedly to achieve desired results. (Catherine, 2017).

There are many studies have been conducted on menstrual hygiene and management of minor ailments during menstruation among normal population. But the increasing need for hygiene maintenance for girl child who are visually challenged always a challenge for those who are taking care of them, which is overlooked. Therefore, there is need to educate the visually challenged girls about menstruation, its importance and hygiene maintenance and management of minor ailments of menstruation, so as to educate them to lead a healthy reproductive life in future. Hence the investigator was motivated to assess and educate regarding menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

Statement of the Problem

An experimental study to assess the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation upon knowledge and practice among visually challenged girls in selected schools, Chennai.

Objectives of the Study

1. To assess the level of knowledge and practice upon menstrual hygiene and management of minor ailments of menstruation among control and experimental group of visually challenged girls.
2. To determine the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation by comparing the pretest and posttest knowledge and practice among control and experimental group of visually challenged girls.
3. To assess the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation among experimental group of visually challenged girls.
4. To associate the pretest and posttest of knowledge and practice on menstrual hygiene and management of minor ailments of menstruation with selected demographic variables and menstrual variables of experimental group of visually challenged girls.
5. To find out the correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.

Operational Definitions

Effectiveness

Effectiveness indicates the occurrence of the preferred changes by audio drama in terms of significant improvement in knowledge and practice regarding menstrual hygiene and the management of minor ailments during menstruation as measured using structured questionnaire in Braille method and non-observational check list on practice.

Audio Drama

Audio drama refers to acoustic performance projecting a sequence of events that are highly sensationalized and organized. It was created by ASHA and downloaded from internet and modifications were made by the investigator which was renewed on a CD (compact disc) focusing on knowledge and practice upon menstrual hygiene and management of minor ailments during menstruation.

Knowledge

Knowledge refers to the awareness of information and skills relating to menstrual hygiene and management of minor ailments during the menstruation as measured by structured knowledge questionnaire developed by the investigator.

Practice

Practice refers to menstrual hygienic practices such as using sanitary pads or cloth and changing every 4 hours during menstruation, front to back technique for cleaning perineal area, using cotton undergarments, adequate fluid intake and mild exercise as measured by check list developed by the investigator.

Menstrual Hygiene

Menstrual hygiene refers to maintenance of hygiene on matter relating to daily bath, right way to use sanitary pad or cloths and its disposal, cleaning perineal area during menstruation to maintain reproductive health and prevent illness.

Minor Ailments of Menstruation

It includes problem associated with menstruation such as dysmenorrhea, pain in breast, back pain, nausea, oligomenorrhoea and polymenorhhoea during menstruation.

Management of Minor Ailments

Visually challenged girls' common response to the minor ailments to maintain health and prevent illness or aliments related to the female reproductive tract.

Visually Challenged Girls

Visually challenged girls refer to inability of the girls to visualize due to congenital deformities, exposure to injury or other causes and have attained menarche.

Assumptions

The study assumes that,

- The visually challenged girls have the potential for changing from being normal to being high risk reproductive illness level quickly.
- Menstrual hygiene is very important to prevent urinary tract infection and maintaining normal reproductive health among the visually challenged girls.
- The visually challenged girls are unaware of menstrual hygiene and management of minor ailments of menstruation.

Null Hypothesis

$H_0$1: There will be no significant difference between pretest and posttest level of knowledge before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$2: There will be no significant difference in pretest and posttest level of practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$3: There will be no significant association between demographic variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$4: There will be no significant association between menstrual variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$5: There will be no significant correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in pretest and posttest of experimental group of visually challenged girls.

Delimitation

- The study was limited to visually challenged girls who were studying in the selected school.
- The study was limited to the students who has attained menarche.
- The study period was limited to 6 weeks.

Conceptual Framework for the Study

The conceptual framework deals with the interrelated concepts that are assessable together in some rational scheme by virtue of their relevance to a common theme (Polit and Beck, 2015).

The conceptual framework of the present study was based on the Modified Herzberg Motivation Theory (1959). Within the context of this theory, the goal of nursing is defined as motivating individuals and groups to attain, maintain, or restore hygiene. Therefore, the nurse acts as an agent of positive change to support and encourage clients in their pursuit of health which is the ultimate goal of nursing

Herzberg motivation theory is derived from a larger conceptual model and does not seek to explain or conceptualize the entire human experience but rather serves as a bridge between a larger conceptual framework and the practice level of nursing.

An individual's expectation or estimated probability that a given behavior will bring a valued outcome determines the choice of means and the effort they will devote to these means.

- High Hygiene + High Motivation: The ideal situation was highly following menstrual hygiene and has highly motivated and has few minor ailments of menstruation.
- High Hygiene + Low Motivation: Highly following menstrual hygiene and has few complaints of minor ailments of menstruation and need low motivation.
- Low Hygiene + High Motivation: Low practices of menstrual hygiene and need high motivation.

- Low Hygiene + Low Motivation: This is the worst situation. Not motivated the menstrual hygiene and had many complaints of menstrual hygiene.

Motivators

The motivators (Getting knowledge, practice, challenging work, opportunity to do understand, something meaningful, involvement in practice, sense of importance) that provide positive satisfaction, arising from intrinsic conditions, such as personal growth and healthy life.

In this study the audio drama on menstrual hygiene and management of minor ailments of menstruation was the motivators (Getting knowledge on menstrual hygiene, practice of menstrual hygiene, management of minor ailments of menstruation and sense of importance of menstrual hygiene) which made them to have positive satisfaction of practicing menstrual hygiene, that arising from intrinsic conditions, such as personal growth and healthy life.

Hygiene Factors

In this study, the hygienic factors (Bath, cleaning perineal area, using soap and water for cleaning perineal area, sanitary napkin and changing every 4 hours during menstruation front to back technique for cleaning perineal area, using cotton undergarments, adequate fluid intake, mild exercise and environment and proper dispose of napkin) are lead to higher motivation for practicing menstrual hygiene. The term "hygiene" is used in the sense that these are maintenance factors. These are extrinsic to the work itself.

It analyses the area of action to be carried out. In this the investigator decides to assess the knowledge and practice of menstrual hygiene and management of minor ailments of menstruation before and after audio drama which may improve the students to have

adequate knowledge and practice of menstrual hygiene and management of minor ailments of menstruation, hygienic satisfaction, reduce minor ailments of menstruation and reduce the health care cost. Thus the researcher takes decision to motivate through audio drama on knowledge and practice of menstrual hygiene and management of minor ailments of menstruation.

Action

The researcher assessed the knowledge and practice of menstrual hygiene and management of minor ailments of menstruation using structured questionaire in braille method and non- observational checklist before audio drama for the samples on visually challenged girls. The researcher had given audio drama on menstrual hygiene and management of minor ailments of menstruation.

Feedback

Outcome may either be satisfactory or unsatisfactory. A satisfactory outcome indicates a positive outcome and unsatisfactory outcome indicates a negative outcome. In this study, the investigator appraises the level of satisfaction on nursing care through a rating scale. The audio drama on menstrual hygiene and management of minor ailments of menstruation which results in satisfactory outcome can be concentrated and implemented.

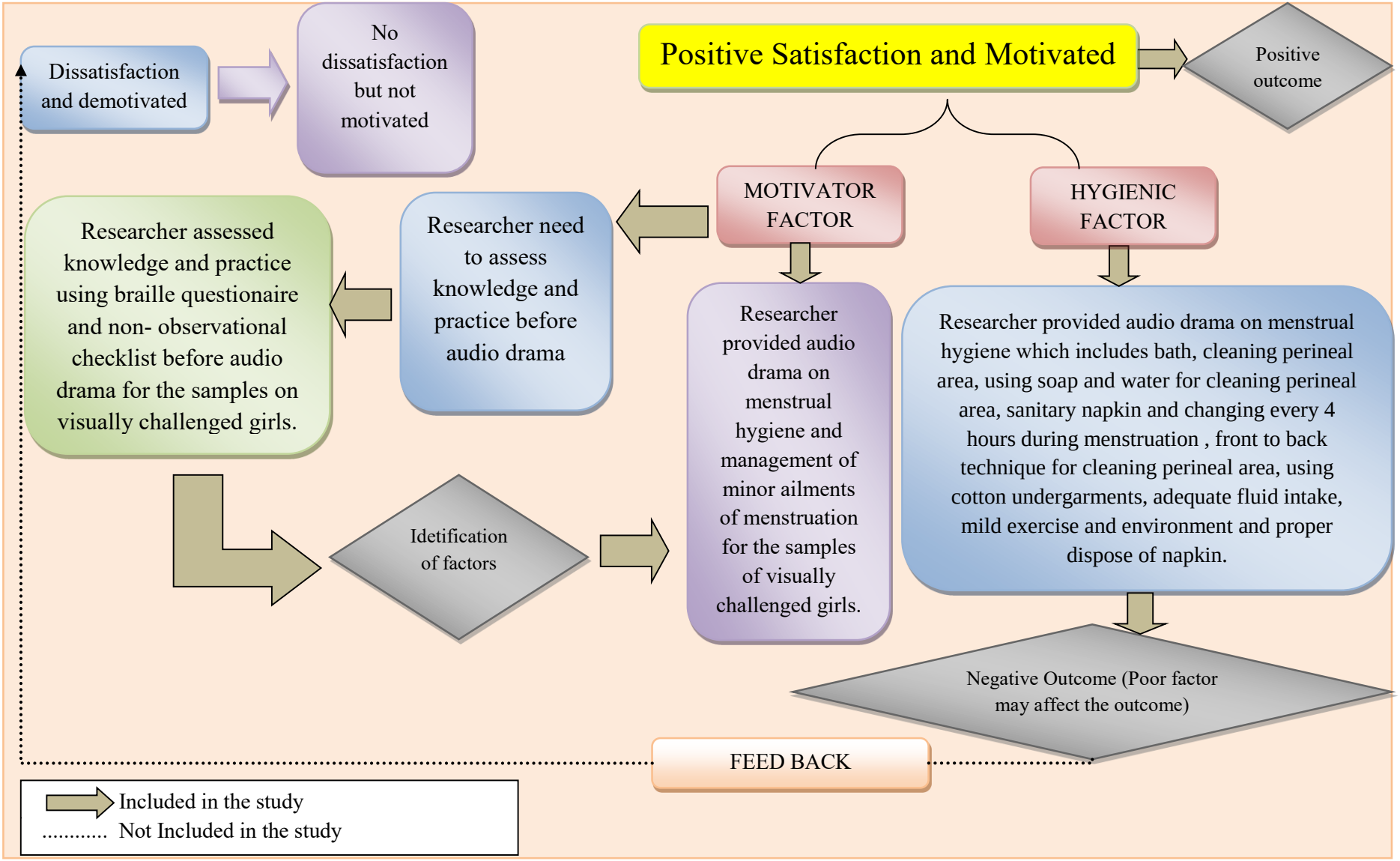

Fig. 1. Conceptual Framework based on Modified Herzberg Motivation Theory (1959)

Projected Outcome

The study will be helpful in obtaining evidence for the visually challenged girls in knowledge and practice of menstrual hygiene and management of minor ailments of menstruation.

Summary

This chapter has dealt with the background, need for the study and statement of the problem, objectives, operational definitions, assumptions, null hypotheses, delimitations and conceptual framework.

Organization of the Report

Further aspects of the study are presented in the following six chapters.

CHAPTER – II : Review of Literature

CHAPTER – III : Research Methodology Which includes Research Approach, Design, Setting, Population, Sample and Sampling Techniques, Tool Description, Content Validity and Reliability of Tools, Pilot Study, Data Collection Procedure and Plan for Data Analysis

CHAPTER–IV : Analysis and Interpretation of Data is presented in terms of Descriptive Statistics and Inferential Statistics

CHAPTER – V : Discussion

CHAPTER – VI : Summary, Conclusion, Implications, Recommendations and Limitations

CHAPTER-II

REVIEW OF LITERATURE

Review of literature helps the researcher to build on existing work he or she should understand what is already known as topic (Polit and Beck, 2015).

Review of literature helps to plan and conduct the study in a systematic manner. It is the task which involves the identification, selection, critical analysis and reporting of existing information on the topic of interest. It provides the basis to locate the data, new ideas that need to be included in the present study. It helps the researcher to find the accurate data that could be used for supporting the present findings and drawing conclusions.

For the present study, the researcher reviewed the related literature and organized under the broad headings.

- **Menstrual Hygiene**
- **Management of Minor Ailments during Menstruation**
- **Problems of Visually Challenged Girls in Practice of Menstrual Hygiene**
- **Prevention of Infection through Good Practice of Menstrual Hygiene**

Menstrual Hygiene

A quantitative survey study was conducted by Hennegan et al. (2016) on measuring the prevalence and impact of poor menstrual hygiene management among 205 menstruating schoolgirls (10–19 years) in rural Uganda. 90.5% of girls failed to meet available criteria for adequate menstrual hygiene practices with no significant difference between those using reusable sanitary pads and those using existing methods,

predominantly cloth (p=0.729). Aspects of Menstrual hygiene management predicted some consequences including shame, not standing in class to answer questions and concerns about odour among the school children.

Among 60 school-going adolescent girls' aged 13-16 years at Karad taluka, an epidemiologic study was undertaken using cross-sectional study method by Mulik et al. (2015) to assess the attitude and practice regarding reproductive health. Non-probability purposive sampling technique was used for data collection. The results of this study was maximum participants were aware about menstruation prior to menarche, and mothers were the main source of information for them. Majority 58 (96.66%) of adolescent girls feels menstruation is good for health as well as using sanitary pads during menstruation period as menstrual absorbent.

Data from 138 studies involving 193 subpopulations and 97,070 girls were extracted for systemic review and meta-analysis to assess the status of menstrual hygiene management among adolescent girls in India to determine unmet needs by Eijk et al. (2015). In 88 studies, half of the girls reported being informed prior to menarche. Commercial pad was used more common among urban than rural girls. Inappropriate disposal was common. A quarter reported missing school during periods. Approximately one third of girls changed their absorbents in school facilities. Half of the girls' homes had a toilet. The quality of studies imposed limitations on analyses and the interpretation of results (mean score 3 on a scale of 0–7).

Pundkar, Zambare, Jayant, Bride (2014) conducted study to assess the knowledge and practice of menstrual hygiene between 11 to 16 years' adolescent girls in one of the municipal corporation school of Ahmednagar. It was evident that only (62.14%) girls were aware about menstruation before menarche. A majority of girls (70.71%) were not

aware of the source of the menstrual bleeding. The study showed that 31.42% of girls used sanitary pads during menstruation, 64.28% of girls used cloth pieces and 4.28% girls used both i.e. sanitary pad and cloth. The cleaning of external genitalia was satisfactory in 97 % of girls and only 3% of girls showed unsatisfactory results.

A self-administered questionnaire was developed by Ray (2014) to conduct the school based cross- sectional study among high school girl students at Western Ethiopia using stratified random sampling technique. To collect data, six girls with high- school education were recruited as data collectors. Out of the total (980) respondents 330 (39.9 %) of the respondents only had good practice on menstrual hygiene.

In India at Chennai, Parameaswari et al. (2013) conducted a survey to assess menstrual hygiene practices among teenage girls. This study suggested that the girls should be educated about the significance of menstruation and the development of secondary sexual characteristics, selection of a sanitary menstrual absorbent and its proper disposal. Lack of privacy is an important problem. In resource poor contexts, where women do not have access to basic facilities such as water, bathroom and privacy, the standard of hygiene one can maintain is severely compromised.

In the year 2011, Adika et al. conducted cross-sectional study to assess the knowledge of perception and behaviour on the use of sanitary pads during menstruation among 140 adolescents of school age is a vital aspect of health education. Questionnaires was given to gather data for analysis. The results show that out of 140 girls, 64.3% of the girls used sanitary pads, 62.3 % had positive self-perception on use of sanitary pads for hygiene purposes while 67.1% felt satisfied as well as good and nice as it boosted their self-confidence, although 66.4% perceived it as expensive. This study recommends the

use of sanitary pads and prevention of infectious diseases as well as to bridge the gap with the training at home by mothers and other sources of information.

An interview schedule planned with 31 items by Suja (2008) to conduct a study to assess the practice and problem in using pad or cloth during menstruation among the blind school children at Salem. The sample were collected in simple random method. The findings show that the problem was more among the samples using cloth (-3.600) ($p<0.05$) during menstruation. knowledge about safe practices during menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of teenage girls.

A study on effectiveness of planned teaching programme on menstrual hygiene among female inmates with using one group pretest posttest design and data were collected using self-reporting technique. The study finding shows that 30% of them had knowledge about anatomy and physiology, menstrual cycle and menstrual hygiene in pretest and 86% in posttest respectively. There is a need to educate women with knowledge regarding safe, hygienic practices to enable them to lead a healthy reproductive life. (Chaste, 2007).

Management of Minor Ailments During Menstruation

In Moradabad, Singh et al. (2017) conducted a true experimental study to assess the effectiveness of ginger remedy in reduction of dysmenorrhea among adolescent girls in College of Engineering. Data were collected from 60 adolescent girls by probability sampling technique using simple random (lottery system) method. The pre survey result found that the prevalence of dysmenorrhea was 41% among adolescent girls. Pretest score of experimental group was 92 ± 26.57 and post test score was 56 ± 17.14 with difference

of 36 revealed that ginger remedy in reduction of dysmenorrhea was effective. The t value obtained was 11.90.

Savitha, Roopa & Sridhara (Davangere, 2016) adopted an evaluative approach with pre experimental one group pretest posttest design in order to evaluate the effectiveness of structured teaching programme on knowledge regarding home remedies on reducing dysmenorrhea. 60 samples selected by stratified random sampling technique. It was found that 't' value computed between mean pretest and posttest knowledge scores is statistically significant at $p < 0.05$ level.

Findings from a postal survey and qualitative interviews in the Lothian region of Scotland by Miriam et al. (2011) to evaluate adolescent's management of menstrual symptoms showed the strategies to manage menstrual symptoms was learnt from personal experience and discussions with others. Also the study findings suggested that adolescents with debilitating menstrual symptoms may not have access to the best information, advice or treatments for this. If available in a range of formats, such as features in health magazines, video information, health-related web-sites and information leaflets, such an approach may help adolescents to self-manage their debilitating symptoms even better.

Problems of Visually Challenged Girls in Practice of Menstrual Hygiene

A study among visually challenged women by Kanmani and Ravisankar (2013) on prevalence of menstrual problems and treatment seeking behavior was conducted. The qualitative method was adopted to identify the sample. Snow ball sampling methods was adopted to choose the study population. Among 745 visually impaired women, 468 women accepted, co-operated and completed the interview. About 27 percent of the respondents have consulted doctors for treatment of the menstrual problems.

The treatment has not resulted in curing menstrual illness for 57 percent of the respondents which indicates that visually impaired women's needs have been so widely and so deeply neglected, or not being properly addressed. Hence, specific measures should be taken for mainstreaming disabled women to get better education on reproductive health.

The practice and problem in using pad or cloth during menstruation among 100 blind children conducted by Punitha (2010). Comparative-correlation survey done using structure interview questionnaire. In that there was a significant negative correlation between practice and problem of using cloth during menstruation $r = -0.139$ ($p<0.05$) among blind school children was identified. There was a high significant correlation between the practice and problem in relation to prolonged menstrual flow $r = 0.874$ among blind school children. When the menstrual hygienic practice is less, the problem will be more. Therefore, blind children need adequate education and suitable assistance to use sanitary materials to prevent problems.

Prevention of Infection through Good Practice of Menstrual Hygiene

The study conducted by Sarah et al. (2017) who conducted a mixed-methods evaluation through cluster-randomized approach among 636 girls enrolled in Grades 6 and 7 in 10 intervention and 10 control schools in two rural districts of the West Shewa Zone of Oromia, Ethiopia. Qualitative evidence underscored a strong interest in interventions that present information on menstruation and puberty in accurate and supportive terms. Consistent with an ecological framework for adolescent health, we conclude that puberty education intervention offer a useful individual-level intervention.

The quasi experimental research study was conducted by Beena (2016) to assess the effect of Instructional programme on knowledge of adolescent girls regarding

reproductive health. Data were collected from adolescent girls and multi stage cluster sampling technique was used to select samples. The researcher developed an Instructional programme (video assisted) with a self-administered teaching module on knowledge regarding reproductive health. A significant difference between mean pretest - post test score was found ($p< 0.001$). The findings of the study revealed that there was significant increase in knowledge of adolescent girls regarding reproductive health. Hence it is concluded that the Instructional programme is effective in improving knowledge of adolescent girls regarding reproductive health.

Mishra et al. (2016) conducted the study was based on a sample of 715 adolescent girls from rural (325) and urban (390) areas of West Bengal, in Eastern India. Data on socioeconomic characteristics, menstrual hygiene practices and gynaecological problems were collected using pretested questionnaires. Rural and urban girls differ ($p<0.01$) for age at menarche, menstrual hygiene practices and prevalence of gynaecological problems. Urban girls have better menstrual hygiene practices ($\beta=0.343$, $p<0.01$) than rural girls. A similar trend is noted for gynaecological problems ($\beta=0.080$, $p<0.01$) among the study participants. Apart from socioeconomic characteristics, menstrual hygiene ($\beta=-0.121$, $p<0.01$) remains a significant predictor of gynaecological problems. The results of path analysis also indicate that girls of higher socioeconomic status have better menstrual hygiene practices which subsequently reduce the prevalence of gynaecological problems among them.

In urban and rural area of West Bengal, a community-based cross-sectional study was conducted among 541 adolescent school girls in the age group of 13–18 years. Data were collected by the predesigned and pretested questionnaires. Only 37.52% girls were aware of menstruation prior to attainment of menarche. The difference in the awareness

regarding menstruation in urban and rural area was highly significant. Only 36% girls in the urban and 54.88% girls in the rural area used homemade sanitary pads and reused the same in the subsequent period. Satisfactory Cleaning of external genitalia was practiced by only 47.63% of the urban and 37.96% of the rural girls. This study found differences in hygienic practices followed by adolescent girls in urban and rural area. (Paria, 2014).

Making a response rate of 100%, multistage stage sampling technique used among 492 students by Gultie et al. (2014) to conduct cross sectional study to assess the age of menarche and knowledge of adolescents about menstrual hygiene management. Mean age at menarche was 14.1±1.4 years. The main sources of information about menstrual hygiene management were teachers for 212 (43.1%). Four hundred forty-six (90.7%) respondents had high level knowledge about menstrual hygiene management. Most of the respondents 457 (92.9%) and 475 (96.5%) had access for water and toilet facility respectively. Place of residence (95%) and educational status of their mothers' (95%) were independent predictors of knowledge about menstrual hygiene management.

The 14 articles were identified by Sumpter and Torondel (2013) to looked at health outcomes through systematic review of the health and social effects of menstrual hygiene management (MHM). The primarily outcome was reproductive tract infections (RTI). 11 articles were identified investigating associations between MHM, social restrictions and school attendance. MHM was found to be associated with RTI in 7 papers. Meta-analysis of a subset of studies found no association between confirmed bacterial vaginosis and MHM (OR: 1.07, 95% CI: 0.52–2.24). Although there was good evidence that educational interventions can improve MHM practices and reduce social restrictions and improvements in management methods to reduce school absenteeism.

Garg, Goyal & Gupta (2012) conducted study on India moves towards menstrual hygiene: subsidized sanitary napkins for rural adolescent girls-issues and challenges. The current article says that in 2010 the Government of India proposed a new scheme towards menstrual hygiene by a provision of subsidized sanitary napkins to rural adolescent girls. But there are various other issues like awareness, availability and quality of napkins, regular supply, privacy, water supply, disposal of napkins, reproductive health education and family support which needs simultaneous attention for promotion of menstrual hygiene.

Summary

This chapter dealt with the review of literature related to the problem stated. Twenty-one studies were reviewed from primary sources and it has helped the researcher to understand the need and impact of the practice under the study. It also enabled the researcher to design the study, develop the tool and plan the data collection procedure to analyse the data.

CHAPTER-III

RESEARCH METHODOLOGY

Research methodology is defined as the way data are gathered in order to answer the questions to analyze the research problem. It enables the researcher to prepare a blue print for the research undertaken. Research methodology involves a systematic procedure by which the researcher had a start from the initial identification of the problem to its final conclusion.

This chapter provides a brief description of the different steps undertaken by the researcher for the study. It involves research approach, research design, setting, population, sample and sampling technique, sampling criteria, selection and development of the instruments, validity and reliability of the instruments, pilot study, data collection procedure and plan for data analysis.

The present study was conducted to assess the effectiveness of audio drama on menstrual hygiene among visually challenged girls at selected schools.

Research Approach

According to Polit and Beck (2015), an evaluation research is most often used when researchers are trying to determine the effectiveness of a rather complex program, rather than when they are evaluating a specific entity. Evaluation research tends to evaluate a program practice or intervention that is embedded in an organizational context.

In this study, the investigator's objective was to assess the effectiveness of audio drama on knowledge and practice regarding menstrual hygiene among visually challenged girls in the selected school. So an experimental research approach was adopted for this study

Research Design

According to Polit and Beck (2015), a research design is the overall plan for addressing a research question, including specifications for enhancing the integrity of the study. Research design is the plan, structure and strategy of investigation of answering the research option. It is the overall blueprint to research to select and carry out the study. A true experimental research design was adopted for this study.

R	O1	X	O2	O3
R	O1	-	O2	O3

O1- Pretest in control and experimental group

O2 - Posttest after seven days of audio drama in control and experimental group

O3 - Posttest after one month in control and experimental group

X - Audio drama refers to acoustic performance projecting a sequence of events that are highly sensationalized and organized. It was created by ASHA and downloaded from internet and modifications were made by the investigator which is renewed on a CD (compact disc) focusing on knowledge and practice upon menstrual hygiene and management of minor ailments during menstruation.

R - Randomization (Selected students were numbered as 1,2,1,2 and so on. All one's were allocated to control group and 2's were allocated to experimental group randomly).

Pretest observation was done before giving the audio drama and posttest observations were made two times

1. One week after intervention
2. One-month interval after intervention.

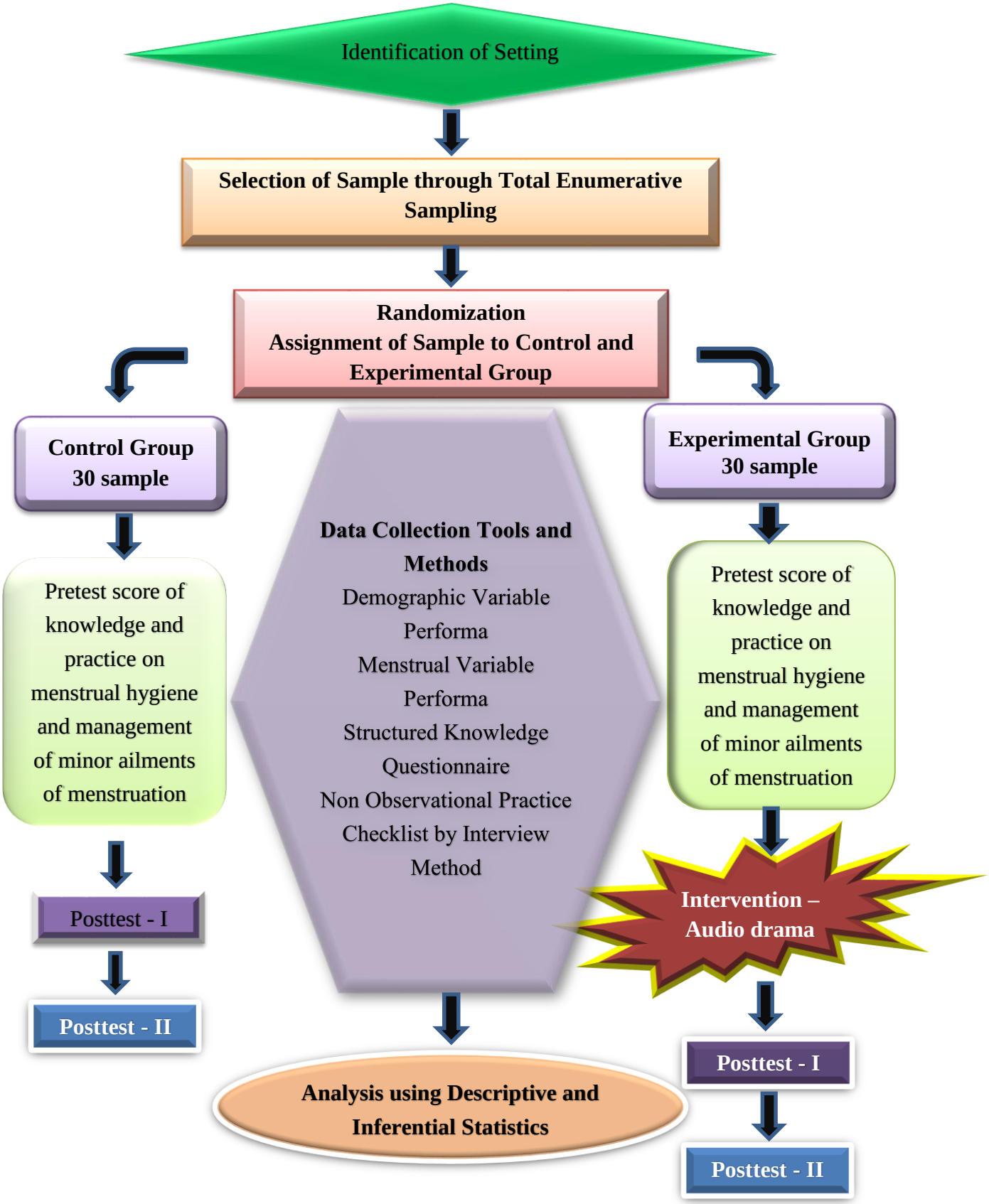

Fig.2.Schematic Representation of Research Design

Variables

Variables are an attribute that varies, that is taken on different values (Polit and Beck, 2015).

Dependent Variables

The variable hypothesized to depend on or be caused by another variables is the dependent variable (Polit and Beck, 2015). In this study, the dependent variables were knowledge and practice on menstrual hygiene and management of minor ailments of menstruation.

Independent Variable

The variable that is believed to cause or influence the dependent variable is the independent variable (Polit and Beck, 2015). The variable hypothesizes to the outcome variable of interest. In this study, the independent variable was audio drama. Audio drama refers to acoustic performance projecting a sequence of events highly sensationalized and organized as the art dealing with a work to be performed by the researcher based on knowledge and practice of menstrual hygiene. The audio drama was used for helping the visually challenged girls to gain knowledge and practice regarding menstrual hygiene and management of minor ailments of menstruation.

Attribute Variables

Variable that describes the study sample characteristics are termed as attribute variable. (Polit and Beck, 2015). It includes demographic variables comprising age, education, religion, family income and clinical variables includes age of menarche, duration of menstrual cycle, number of days, history of dysmenorrhea were the attribute variables of this study.

Research Setting

According to Polit and Beck (2015), setting is the physical location and condition in which data collection takes place in a study.

The study was conducted in two groups, namely control and experimental groups selected from a school, Little Flower Convent Hr.Sec. School for Visually Impaired, which is situated in Nungambakkam Chennai.

This school provides an all-round education to the visually challenged and makes them self-dependent and self-confident and thus to integrate themselves with the mainstream of the society. For achieving this, children from the age of four are trained in different skills namely, mobility, braille reading & writing, communication skills, physical skills, home management skills, self-help skills and vocational skills. It follows the equitable education syllabus from 1st Std to 12th Std which was proposed by the Govt. of Tamil Nadu. It offers history, geography, economics and computer Science/political science at higher secondary level.

Population

Polit and Beck (2015) have stated that the population is the entire aggregation of cases which meet designed set criteria. In this study, the target population comprises of visually challenged girls.

The target population is the group of people that the researcher aims to study and whom the study findings will be generalized. In this study target population comprised of all visually challenged girls who satisfy the inclusion criteria.

The accessible population is the list of population that the researcher finds in the study area. The accessible population in this study consisted of all visually challenged girls who satisfy the inclusion criteria in selected school.

Sample

The sample is the subset of population, selected to participate in a study (Polit and Beck, 2015). A sample consisted of visually challenged girls who were full filling the inclusion criteria and who were studying in the Little Flower Convent Hr.Sec.School for Visually Impaired, Nungambakkam, Chennai.

Sample Size

Sample for this study consisted 60 visually challenged girls, 30 in the control group and 30 in the experimental group who met the inclusion criteria.

Sampling Technique

Sampling is the process of selecting a portion of the population to represent the entire population (Polit and Beck, 2015). Total enumerative sampling technique was used in this study. There were 60 students in 8^{th} and 9^{th} std together (30 in 8^{th} std and 30 in 9^{th} std). All of them were included in the study.

Sampling Criteria

Inclusion Criteria

- Visually challenged girls who attained menarche.
- Visually challenged girls from 14 to 18 yrs.
- Visually challenged girls studying in the little flower convent for visually impaired.

Exclusion Criteria

- Visually challenged girls were not willing to participate in the study.
- Visually challenged girls who had hearing impairment.

Selection and Development of Study Instruments

The study aimed at the evaluation of the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation. The data collection instruments were developed through an extensive review of literature in consultation with the opinion of the experts and with the opinion of the faculty members. The instruments used for the study were demographic variable proforma, menstrual variable proforma, Braille method of structured questionnaire tools on knowledge of menstrual hygiene and management of minor ailments of menstruation, Check list on practice of menstrual hygiene and Rating scale on level of satisfaction of audio drama on menstrual hygiene and management of minor ailments of menstruation.

Demographic Variable Proforma

This proforma was used by the researcher for collecting demographic variable such as the age, education, religion, family income and area of residence.

Menstrual Variable Proforma

This proforma was used for identification of the menstrual variables such as age at menarche, menstrual hygiene, duration of menstrual cycle, duration of menstrual flow, pain during menstruation, other discomfort during menstruation and type of material used during menstruation.

Braille Method Structured Questionnaire Tools to Assess Knowledge of Menstrual Hygiene and Management of Minor Ailments of Menstruation

A tool was developed by the investigator through an extensive review of literature in consultation with experts and with the opinion of faculty members. It contains 25 MCQ items with 3 options (one right answer & 2 distractors) and each right answer was scored one. The scoring ranges from 0 to 25. The obtained score was converted into percentage and interpreted as follows.

Scoring	Percentage	Interpretation
1 – 8	< 50	Inadequate Knowledge
9 – 16	50 – 75	Moderate Knowledge
17 – 25	>75	Adequate Knowledge

Check List on Practice of Menstrual Hygiene and Management of Minor Ailments of Menstruation

The practice assessment checklist was developed by investigator through an extensive review of literature in consultation with experts and with the opinion of faculty members. It contains 15 items and each right answer was scored one. The obtained score was converted into percentage and interpreted as follows.

Scoring	Percentage	Interpretation
1 – 5	< 50	Poor Practice
6 – 10	50 – 75	Average Practice
11 – 15	>75	Good Practice

Rating Scale on Satisfaction of Audio Drama on Menstrual Hygiene and Management of Minor Ailments of Menstruation

The rating scale was designed to assess the level of satisfaction of the visually challenged girls regarding audio drama on menstrual hygiene and management of minor ailments of menstruation and it was assessed by researcher at the end of audio drama.

It contains ten items and with 4 options such as highly satisfied = 4, satisfied = 3, dissatisfied = 2, highly dissatisfied =1. Hence the obtainable score is 10 – 40 and the score was converted into percentage and interpreted as follows.

Scoring	Percentage	Level of Satisfaction
1 – 10	0 – 25	Highly Dissatisfied
11 – 20	26 – 50	Dissatisfied
21 – 30	51 – 75	Satisfied
31 – 40	76 – 100	Highly Satisfied

Psychometric Properties of the Instruments

Validity of Study Instruments

Content validity is the degree to which an instrument measures what it is supposed to measure. It is the sampling adequacy of the content being measured. (Polit and Beck, 2015).

The content validity of the tool was obtained by getting opinions from experts in the field of Medicine and Nursing. The validators suggested some specific modifications in the objectives and rating scale. The modifications and suggestions of experts were incorporated in the final preparation of the tool.

Reliability of Study Instruments

Reliability is the degree of consistency or dependability with which an instrument measures the attribute it intended to measure. (Polit and Beck, 2015).

The reliability of the tools was determined using test re-test method and inter rater technique. Karl Pearson's 'r' was computed for finding out the reliability. High correlation was noted in both structured questionnaire (r =0.9) and practice observational check list (r =0.9) for visually challenged girls using inter rater technique and rating scale for visually challenged girls' satisfaction using test re-test method (r =0.9).

Pilot Study

According to Polit and Beck (2015), a pilot study is a miniature or some part of the actual study, in which the instruments are administered to the subjects drawn from the population. It is a small scale version or trial run, done in preparation for the major study. The purpose is to find out the feasibility and practicability of the study design.

The pilot study was conducted in Little Flower Convent Hr.Sec. School for Visually Impaired, Chennai. Five students on control group and five students on experimental group were selected as study participants. Pre assessment of the knowledge and practice was done by using Braille structured questionnaire and non-observational check list. Consecutively two assessments were done after audio drama, on the day and 2 days after audio drama. The pilot study revealed the feasibility and effectiveness and the study instruments were found to be appropriate.

Intervention Protocol

After obtaining permission and written consent from the principal and oral consent from the students, the researcher assessed the pretest knowledge and practice in both experimental and control groups simultaneously using predetermined tool such as structured knowledge questionnaires and checklist. The intervention of audio drama for experimental group was started after completion of pretest in control and experimental group. The audio drama was given to experimental group at 3 times with interval of 1 day using auditory and kinaesthetic method of teaching by the researcher. Researcher was with the students throughout the intervention. Researcher assessed the knowledge and practice, which include changing napkin, type of napkin, hand hygiene, bath, cleaning pattern of perineum and remedies taken for minor ailments during menstruation.

Two consecutive assessments of knowledge and practice were made after audio drama on 7^{th} day and an interval of one month. The level of satisfaction of students with the audio drama on menstrual hygiene and management of minor ailments of menstruation was assessed using the rating scale. After completion of the intervention, assessment of the students' satisfaction regarding audio drama was ensured using rating scale.

Protection of Human Rights

- The study was conducted after obtained ethical clearance from Ethics committee, Apollo Hospitals, Chennai.
- Permission was obtained from principal of Apollo college of nursing and HOD of OBG Department and headmistress of Little Flower Convent Hr.Sec. School for Visually Impaired.
- Oral consent was obtained from all the samples before the data collection.
- Confidentiality was maintained throughout the study

Data Collection Procedure

Data collection is the precise, systematic gathering of information relevant to the research purpose. The researcher presented the proposal to the ethics committee, Apollo Hospitals and got ethical clearance to proceed with the study. The investigator collected the data from Little Flower Convent Hr.Sec. School for Visually Impaired after obtaining proper permission from the school administrative authorities. The observation time schedule was from 11a.m to 12 noon and 2. 00p.m to 3.00 p.m. and the data collection period was from 1.11.2016 to 10.12.2017.

A group of 60 visually challenged girls were selected using a total enumerative sampling technique. There were 60 students in 8^{th} and 9^{th} std together (30 in 8^{th} std and 30 in 9^{th} std). All of them were included in the study and consent was obtained from the Little Flower Convent Hr.Sec. School for Visually Impaired school headmistress. Among the 60 selected students, students were numbered as 1,2,1,2 and so on. All one's were allocated to control group and 2's was allocated to experimental group randomly. The baseline data was collected through the demographic variable and menstrual variable proforma.

First pre assessment was done for control and experimental groups with data collection tool which included Braille structured questionnaires for knowledge and check list for practice. Followed by audio drama on menstrual hygiene and management of minor ailments of menstruation was given to experimental group for thrice at the interval of 1 day. Post assessment was done for 2 consecutive periods for students at 7^{th} day and an interval of one month after audio drama. Then the level of satisfaction of students were assessed using rating scale after the intervention in experimental group.

Problems Faced during Data Collection

The problems faced during the data collection were,

- Lack of time for students to participate in the study.
- Follow up was difficult due to time constraints of the students.

Plan for Data Analysis

Data analysis is the systematic organization, synthesis of research data, and testing of null hypothesis by using obtained data (Polit and Beck, 2015). Analysis and interpretation of the data were carried out by using descriptive and inferential statistics. Descriptive statistics such as mean, frequency, percentage and standard deviation was used to describe the demographic variables and menstrual variables among students of visually challenged girls.

Inferential statistics like un-paired `t' test were used for assessment of the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation. Chi square test was used to assess the association between of outcome of knowledge and practice and the selected demographic and menstrual variables of students of visually challenged girls. Karl Pearson's coefficient correlation used was used to correlate between knowledge and practice in control and experimental group.

Summary

This chapter has dealt with the selection of the research approach, research design, setting, population, sample, sampling technique, sampling criteria, selection and development of study instruments, validity, reliability of the study, pilot study, data collection procedure, problem faced during data collection and plan for data analysis.

CHAPTER - IV

ANALYSIS AND INTERPRETATION

This chapter includes both descriptive and inferential statistics. Statistics is the field of study concerned with techniques or methods of collection of data, classification, summarizing, interpretation, drawing inferences, testing of hypothesis, making recommendation. (Mahajan, 2004).

Data was collected from 60 visually challenged girls from Little Flower Convent Hr.Sec. School for Visually Impaired, Chennai to determine the effectiveness of Audio drama on menstrual hygiene and management of minor ailments of menstruation. The data was analyzed on the basis of the objectives and hypothesis of the study. Analysis of study was completed after the entered data was transferred to the master coding sheet. The investigator used descriptive and inferential statistics for analysis**.**

Organization of Findings

The findings of the study were organized and presented under the following headings

- Frequency and percentage distribution of demographic variables in control and experimental group of visually challenged girls.
- Frequency and percentage distribution of menstrual variables in control and experimental group of visually challenged girls.
- Frequency and percentage distribution of level of knowledge in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in control and experimental group of visually challenged girls.

- Frequency and percentage distribution of level of practice in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in control and experimental group of visually challenged girls.
- Frequency and percentage distribution of level of satisfaction regarding audio drama on menstrual hygiene and management of minor ailments of menstruation among experimental group of visually challenged girls.
- Comparison of mean and standard deviation of knowledge in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in control and experimental group of visually challenged girls.
- Comparison of mean and standard deviation of practice in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in control and experimental group of visually challenged girls.
- Comparison of mean and standard deviation of knowledge in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in control and experimental group of visually challenged girls.
- Comparison of mean and standard deviation of practice in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in control and experimental group of visually challenged girls.
- Association between selected demographic variables and the level of knowledge in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.
- Association between selected demographic variables and the practice in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.

- Association between selected menstrual variables and the level of knowledge in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.
- Association between selected menstrual variables and the practice in pretest and posttest on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.
- Correlation between knowledge and practice of menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.

Table.1

Frequency and Percentage Distribution of Demographic Variables in Control and Experimental Group of Visually Challenged Girls

Demographic Variables	Control group n= 30		Experimental group n= 30		χ^2
	f	%	f	%	
Age in Years					
14 Years	17	56.67	18	60	0.06
15 Years	13	43.33	12	40	NS
Religion					
Hindu	19	63.33	18	60	
Christian	6	26.67	6	26.67	0.11
Muslim	5	16.67	6	26.67	NS
Others	-	-	-	-	
Standard of Education					
8th standard	15	50	15	50	-
9th standard	15	50	15	50	
Area of Residence					
Urban	30	100	30	100	
Rural	-	-	-	-	-
Sub – urban	-	-	-	-	

NS – Not significant

The data provides in Table1 revealed that a majority of the visually challenged girls were 14 years old (56.67 %, 60 %) and Hindus (63.33 %, 60 %) in control and experimental groups respectively.

Half of them were studying 8^{th} std and half of them were studying 9^{th} std (50 %, 50 %), and all of them were residing in urban area (100 %, 100 %) in control and experimental group respectively.

There was no significant difference between control and experimental group with regard to demographic variables, indicating the homogeneity of the groups respectively.

Figure 3 infers that the majority of visually challenged girls have family monthly income above 10000 (83.33%, 76.67 %) in the control and the experimental groups.

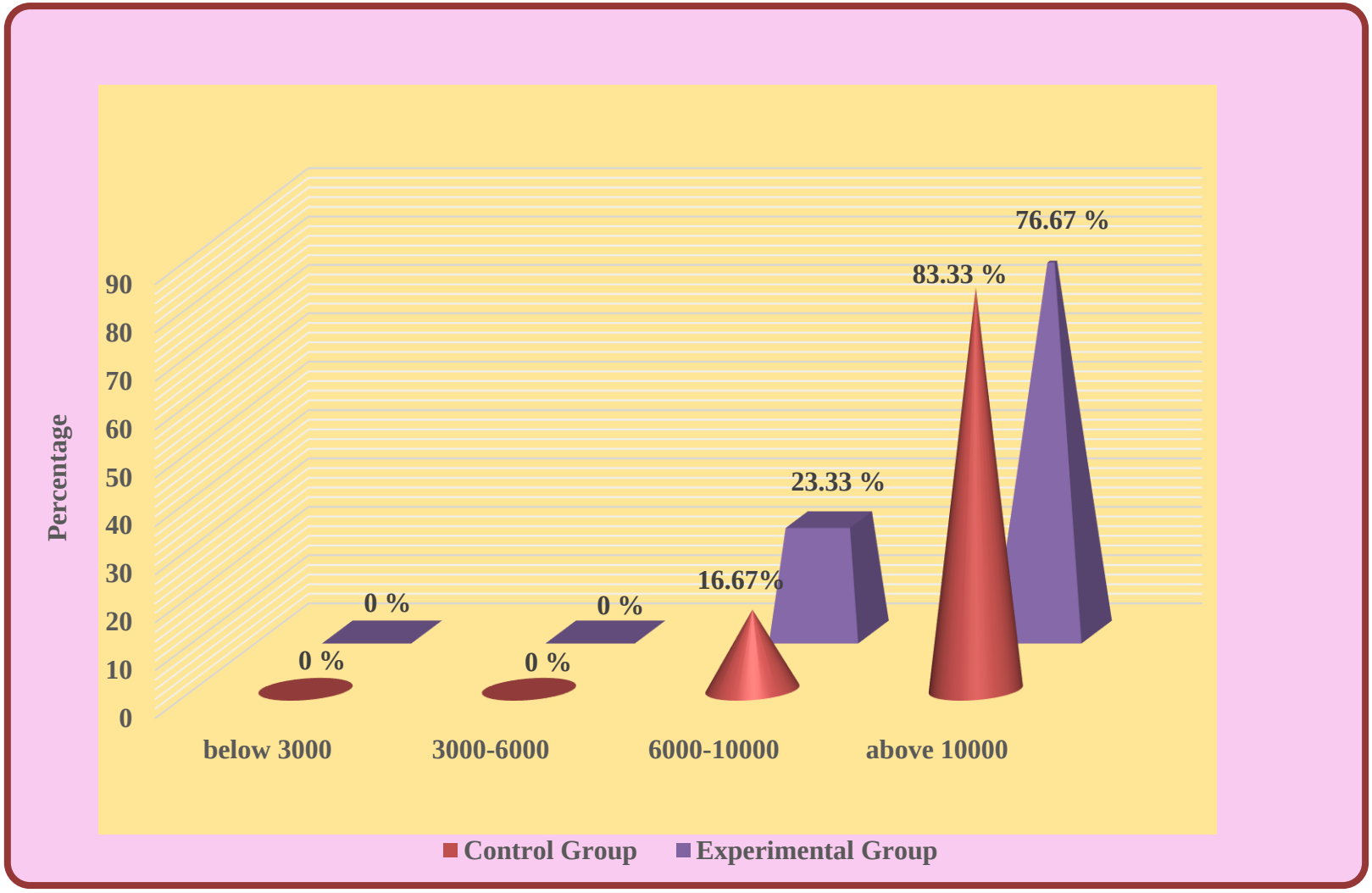

Fig.3.Percentage Distribution of Family Monthly Income Among Visually Challenged Girls.

Table.2

Frequency and Percentage Distribution of Menstrual Variables in Control and Experimental Group of Visually Challenged Girls

Demographic Variables	Control group n= 30		Experimental group n= 30		χ^2
	f	%	f	%	
Age at Menarche					
12 – 14 years	15	50	15	50	
15 – 16 years	15	50	15	50	-
Above 16 years	-	-	-	-	
Knowledge of Menstruation					
Yes	30	100	30	100	-
No	-	-	-	-	
Source of Information					
Parents	30	100	30	100	
Teachers	-	-	-	-	
Friends and elders	-	-	-	-	-
Mass media (Radio, TV)	-	-	-	-	
Regularity of Menstruation					
Regular	7	23.33	8	26.67	0.08
Irregular	23	76.67	22	73.33	NS
Duration of Menstrual Cycle					
Below 28 days	-	-	-	-	
28 – 30 day	7	23.33	8	26.67	0.08 NS
Above 30 days	23	76.67	22	73.33	
Duration of Menstrual Flow					
Less than 3 days	-	-	-	-	
3 – 5 days	13	43.33	13	43.33	0.17
6 – 7 days	14	46.67	13	43.33	NS
More than 7 days	3	10	4	13.33	

Presence of Minor Disorder					
Yes	30	100	30	100	-
No	-	-	-	-	

NS – Not significant

The data presented in table 2 revealed that half of the students of visually challenged girls was attained menarche between the age of 12-14 years (50 %, 50 %) and half of the students was attained menarche between the age of 15-16 years (50 %, 50 %) in control and experimental group respectively. All of them had a previous knowledge about menstruation (100%, 100%) and the source of information was their parents (100%, 100%), Most of the students had irregular menstruation (76.67%, 73.33 %), and their duration of menstrual cycle was above 30 days (76.67%, 73.33 %), less than half of the students had between 5-7days menstrual flow (46.67%, 43.33%), All of them had minor disorders during menstruation (100%, 100%) in the control and the experimental groups respectively.

There was no significant difference between control and experimental group with regard to clinical variables, indicating the homogeneity of the groups respectively.

Figure 4 shows that most of the visually challenged girls had back pain (70%, 63.33%) in control and experimental group respectively.

Figure 5 infers that most of the visually challenged girls had experience of dysmenorrhea (63.33%, 63.33%) in control and experimental group respectively.

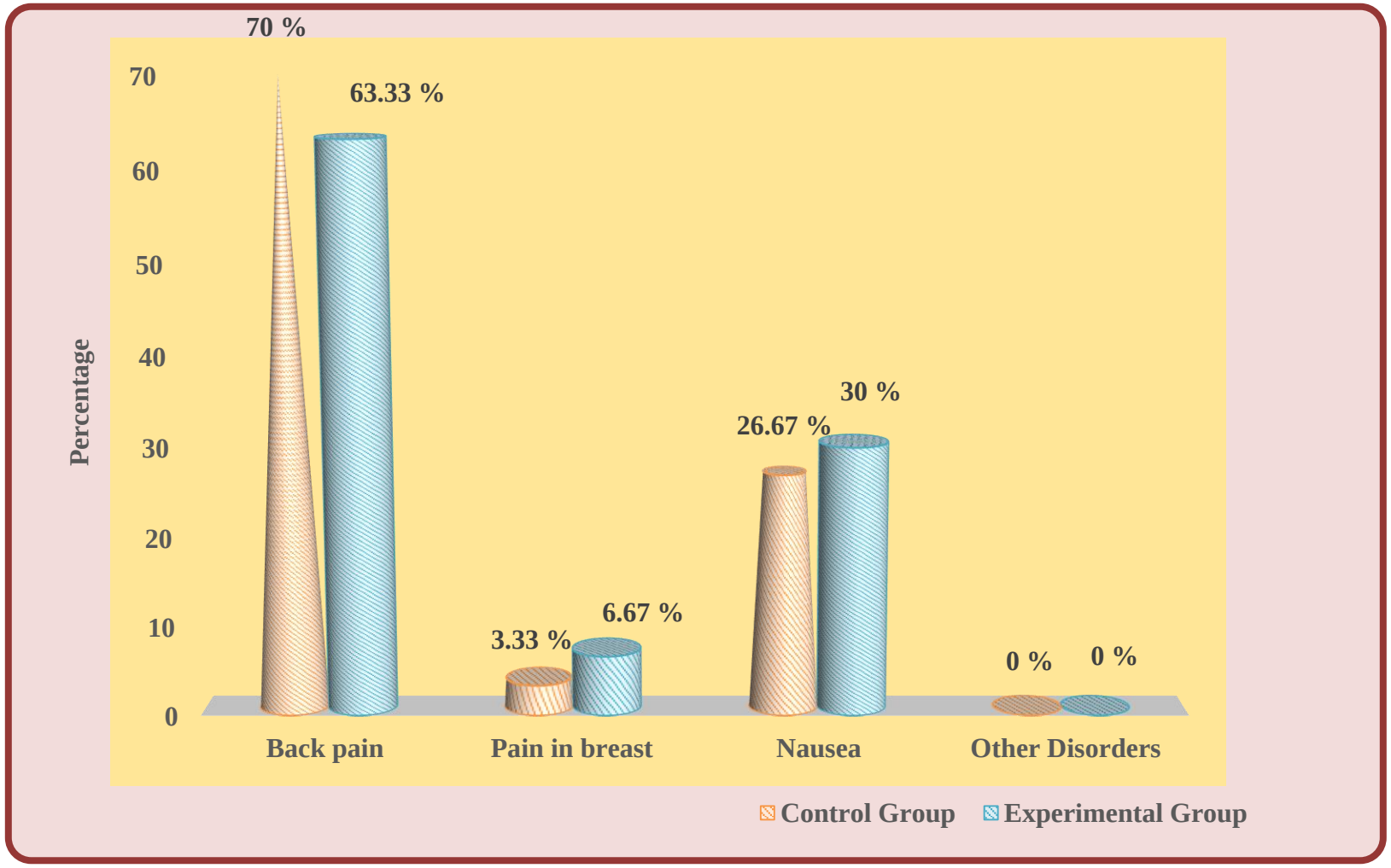

Fig.4. Percentage Distribution of Minor Disorder Symptoms during Menstruation among Visually Challenged Girls

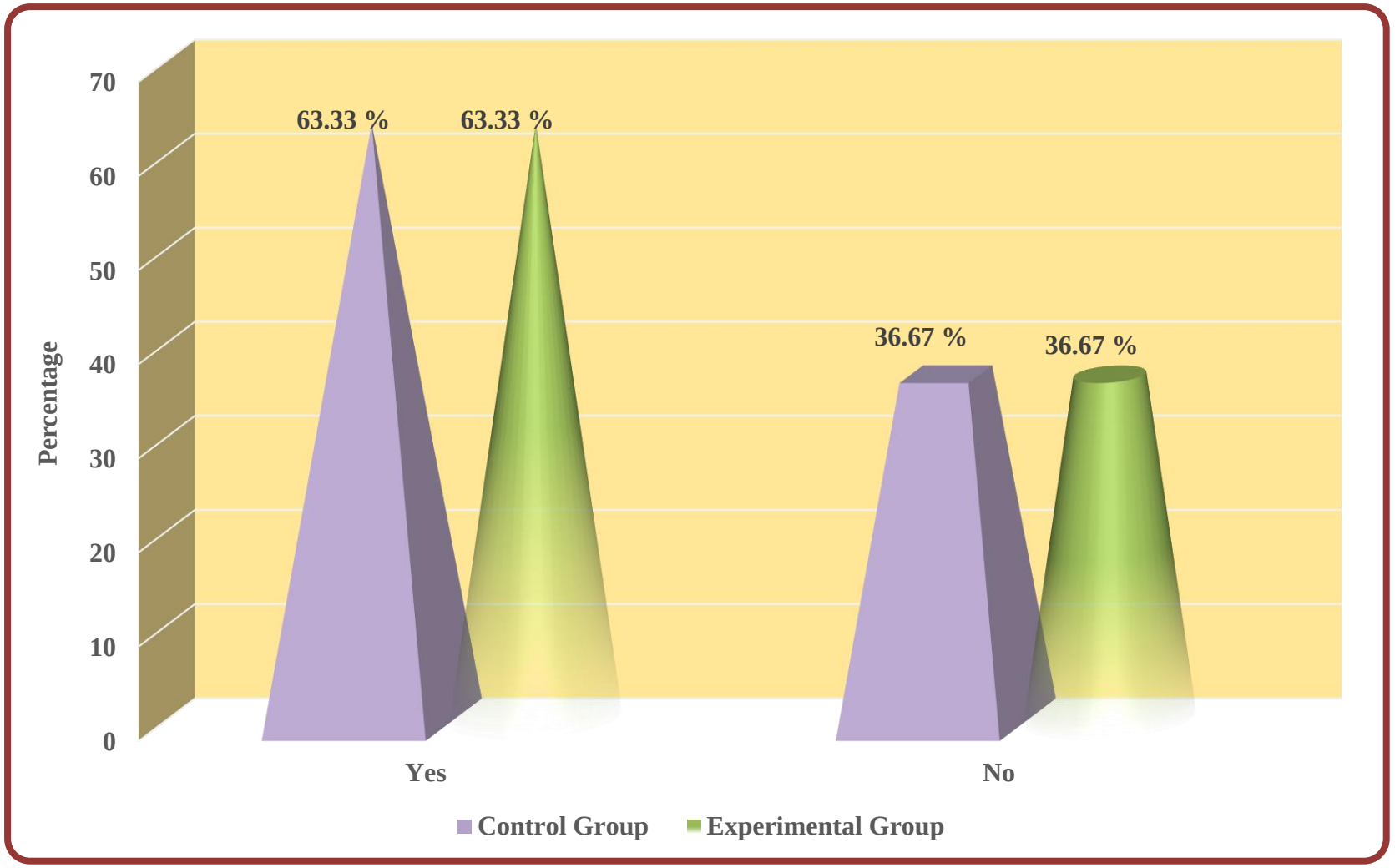

Fig.5. Percentage Distribution of Experience of Dysmenorrhea among Visually Challenged Girls

Table.3

Frequency and Percentage Distribution of Level of Knowledge in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Control and Experimental Group of Visually Challenged Girls

Assessment	Control Group n = 30						Experimental Group n = 30					
	Inadequate Knowledge		Moderate Knowledge		Adequate Knowledge		Inadequate Knowledge		Moderate Knowledge		Adequate Knowledge	
	f	%	f	%	f	%	f	%	f	%	f	%
Pretest	14	46.67	16	53.33	-	-	16	53.33	14	46.67	-	-
Posttest –I	14	46.67	16	53.33	-	-	-	-	21	70	9	30
Posttest –II	14	46.67	16	53.33	-	-	-	-	23	76.67	7	23.33

The above findings revealed from table 3 that around half of them had moderate knowledge (53.33, 46.67%) and half of them had inadequate knowledge (46.67, 53.33%) in pretest in control and experimental group of students. However, in the experimental group, most of the students had moderate knowledge (70%) and 30 % had adequate knowledge in posttest I and had moderate (76.67%) and adequate knowledge (23.33%) in posttest II after audio drama on menstrual hygiene and management of minor ailments of menstruation.

Table.4

Frequency and Percentage Distribution of Level of Practice in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Control and Experimental Group of Visually Challenged Girls

Assessment	Control Group n = 30						Experimental Group n = 30					
	Poor		Average		Good		Poor		Average		Good	
	f	%	f	%	f	%	f	%	f	%	f	%
Pretest	19	63.33	11	36.67	-	-	17	56.67	13	43.33	-	-
Posttest –I	11	36.67	19	63.33	-	-	-	-	-	-	30	100
Posttest –II	11	36.67	19	63.33	-	-	-	-	-	-	30	100

The above findings revealed that majority of them had poor menstrual hygiene practice (63.33, 57.67%) before audio drama in the control and the experimental groups. Whereas in the experimental group all the students showed good menstrual hygiene practice in posttest I (100%) and posttest II (100%).

Table.5

Frequency and Percentage Distribution of Level of Satisfaction Regarding Audio Drama on Menstrual Hygiene and Management of Minor Ailments of Menstruation among Experimental Group of Visually Challenged Girls N=30

Domains	Highly Satisfied		Satisfied		Dissatisfied		Highly Dissatisfied	
	f	%	f	%	f	%	f	%
Related to Researcher	6	20	24	80	-	-	-	-
Related to Audio drama	6	20	24	80	-	-	-	-

Table 5 depicts that the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation shows that 80% were satisfied and 20% were highly satisfied with the researcher and audio drama on menstruation and management of minor ailments of menstruation among visually challenged girls.

Table.6

Comparison of Mean and Standard Deviation of Knowledge in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Control and Experimental Group of Visually Challenged Girls

Comparison	Control Group n = 30			Experimental Group n = 30		
	Mean	SD	Paired t- value	Mean	SD	Paired t- value
Pretest vs	9.83	1.54	0.15	9.73	1.59	**21.53*** **
Posttest – I	9.77	1.52		18.13	1.45	
Pretest vs	9.83	1.54	0.15	9.73	1.59	**22.35*** **
Posttest – II	9.77	1.52		18	1.34	
Posttest – I vs	9.77	1.52	0	18.13	1.45	0.43
Posttest – II	9.77	1.52		18	1.34	NS

***p<0.001, NS – Not Significant**

The difference in mean and standard deviation of knowledge in control group between pretest vs posttest I (M=9.83, 9.77 SD=1.54,1.52), pretest vs posttest II (M=9.83, 9.77 SD=1.54,1.52) and posttest I vs posttest II (M=9.77, 9.77 SD=1.52,1.52) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation of knowledge between pretest vs posttest I (M=9.73, 18.13 SD=1.59, 1.45) and pretest vs posttest II (M=9.73, 18 SD=1.59, 1.34) was statistically significant at p<0.001 level.

Hence the null hypothesis $H_0$1 "There will be no significant difference between pretest and posttest level of knowledge before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" was rejected. When the posttest I and posttest II (M=18.13,18 SD=1.45, 1.34) were compared in the experimental group, there was no statistically significant difference indicating the retention of knowledge even after the interval of one month.

Table.7

Comparison of Mean and Standard Deviation of Practice in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Control and Experimental Group of Visually Challenged Girls

Comparison	Control Group n = 30			Experimental Group n = 30		
	Mean	SD	Paired t- value	Mean	SD	Paired t- value
Pretest vs Posttest – I	5.3 5.4	1.0 1.1	0.37	5.31 13.4	1.03 0.48	**40.45*** **
Pretest vs Posttest – II	5.3 5.4	1.0 1.1	0.37	5.31 13.13	1.03 2.36	**16.63*** **
Posttest – I vs Posttest – II	5.4 5.4	1.1 1.1	0	13.4 13.13	0.48 2.36	0.9 (NS)

*****p<0.001, NS – Not Significant**

The difference in mean and standard deviation of practice in the control group between pretest vs posttest I (M=5.3, 5.4 SD= 1.0, 1.1), pretest vs posttest II (M=5.3, 5.4 SD= 1.0, 1.1) and posttest I vs posttest II (M=5.4, 5.4 SD= 1.1, 1.1) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation between pretest vs posttest I (M=5.31, 13.4 SD= 1.03, 0.48) and pretest vs posttest II (M=5.31, 13.13 SD= 1.03, 2.36) was statistically significant at p<0.001 level.

Hence the null hypothesis $H_0$2 stated that there will be no significant difference between pretest and posttest level of practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls. was rejected. When the posttest I and posttest II (M=13.4, 13.13 SD= 0.48, 2.36) were compared in the experimental group, there was no statistically significant difference indicating the retention of practice level even after the interval of one month.

Table.8

Comparison of Mean and Standard Deviation of Knowledge in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Control and Experimental Group of Visually Challenged Girls

Comparison	Control Group n = 30		Experimental Group n = 30		Independent t- value
	Mean	SD	Mean	SD	
Pretest	9.83	1.54	9.73	1.59	0.25 NS
Posttest – I	9.77	1.52	18.13	1.45	**22*** **
Posttest – II	9.77	1.52	18	1.34	**22.86*** **

***p<0.001, NS – Not Significant**

Table 8 infers that the pretest knowledge of control and experimental group had no difference in mean score. In posttest I and II, the knowledge of experimental group had higher mean score (M=18.13, 18) in comparison with the control group (M= 9.77, 9.77). The difference was statistically significant (p<0.001).

Hence the null hypothesis $H_0$1 stated that there will be no significant difference between pretest and posttest level of knowledge before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls was rejected.

Table.9

Comparison of Mean and Standard Deviation of Practice in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Control and Experimental Group of Visually Challenged Girls

Comparison	Control Group n = 30		Experimental Group n = 30		Independent t- value
	Mean	SD	Mean	SD	
Pretest	5.3	1.0	5.31	1.03	0.26 NS
Posttest – I	5.4	1.1	13.4	0.48	**36*** **
Posttest – II	5.4	1.1	13.13	2.36	**16.8*** **

***p<0.001, NS – Not Significant**

Table 9 depicts that the pretest practice of control and experimental group had no difference in mean score. In posttest I and II, the practice of experimental group had higher mean score (M=13.4, 13.13) in comparison with the control group (M= 5.4, 5.4). The difference was statistically significant (p<0.001).

Hence the null hypothesis $H_0$2 stated that there will be no significant difference between pretest and posttest level of practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls was rejected.

Table.10

Association between Selected Demographic Variables and the Level of Knowledge in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Experimental Group of Visually Challenged Girls N=30

Variables	Pretest			Posttest –I			Posttest –II		
	Upto mean	Above mean	χ^2	Upto mean	Above mean	χ^2	Upto mean	Above mean	χ^2
Age in Years									
14 years	14	4	0.35#	13	5	0.24#	14	4	0.35#
15 years	7	5	df =1	8	4	df =1	7	5	df =1
Religion									
Hindu	13	5	0.47#	12	6	1.21#	13	5	0.71#
Christian	4	2	df=2	4	2	df=2	5	1	df=2
Muslim	4	2		5	1		5	1	
Standard of Education									
8th	9	6	0.13	10	5	1.22	10	5	0.55
9th	8	7	df =1	7	8	df =1	8	7	df =1
Monthly Income									
< 10,000	4	3	0.75#	5	2	0.24#	6	1	0.84#
> 10,000	17	6	df =1	16	7	df =1	17	6	df =1

 # Yates correlated value

Table 10 indicates that there was no significant association between the selected demographic variables and level of knowledge in visually challenged girls. Hence the null hypothesis $H_0$3 stated that there will be no significant association between the demographic variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls was retained.

Table.11

Association between Selected Demographic Variables and the Practice in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Experimental Group of Visually Challenged Girls **N=30**

Variables	Pretest			Posttest –I			Posttest –II		
	Upto mean	Above mean	χ^2	Upto mean	Above mean	χ^2	Upto mean	Above mean	χ^2
Age in Years									
14 years	9	9	0.96#	11	7	0.01	11	7	0.19
15 years	8	4	df =1	7	5	df =1	9	3	df =1
Religion									
Hindu	9	9	2.61#	9	9	2.76#	11	7	0.49#
Christian	3	3	df=2	5	1	df=2	4	2	df=2
Muslim	5	1		4	2		5	1	
Standard of Education									
8th std	10	5	1.22	9	6	0.13	10	5	1.22
9th std	7	8	df =1	8	7	df =1	7	8	df =1
Monthly Income									
< 10,000	3	4	0.79#	3	4	1.19#	5	2	0.22#
> 10,000	14	9	df =1	15	8	df =1	15	8	df =1

 # Yates correlated value

Table 11 denotes that there was no significant association between the selected demographic variables and level of practice in visually challenged girls. Hence the null hypothesis $H_0$3 stated that there will be no significant association between demographic variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls was retained.

Table.12

Association between Selected Menstrual Variables and the Level of Knowledge in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Experimental Group of Visually Challenged Girls N=30

Variables	Pretest			Posttest – I			Posttest – II		
	Upto mean	Above mean	χ^2	Upto mean	Above mean	χ^2	Upto mean	Above mean	χ^2
Age of Menarche									
<14 years	11	4	0.31# df =1	11	4	0.31# df =1	12	3	0.36# df =1
>14 years	10	5		10	5		11	4	
Regularity of Menstruation									
Regular	5	3	0.39# df =1	6	2	0.38# df =1	6	2	0.2# df =1
Irregular	16	6		15	7		17	5	
Duration of Menstrual Cycle									
< 30 days	5	3	0.39# df =1	6	2	0.38# df =1	6	2	0.2# df =1
> 30 days	16	6		15	7		17	5	
Duration of Menstrual Flow									
< 5 days	8	5	0.78# df =1	10	3	0.7# df =1	10	3	0.18# df=1
> 5 days	13	4		11	6		13	4	
Experience of Dysmenorrhea									
Yes	13	6	0.23# df =1	13	6	0.06# df =1	14	5	0.46# df =1
No	8	3		8	3		9	2	

 # Yates correlated value

It was observed from table 12 that there was no significant association between the selected menstrual variables and level of knowledge. Hence the null hypothesis $H_0$4 stated that there will be no significant association between the menstrual variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls was retained.

Table.13

Association between Selected Menstrual Variables and the Practice in Pretest and Posttest on Menstrual Hygiene and Management of Minor Ailments of Menstruation in Experimental Group of Visually Challenged Girls **N=30**

Variables	Pretest		χ^2	Posttest – I		χ^2	Posttest – II		χ^2
	Upto mean	Above mean		Upto mean	Above mean		Upto mean	Above mean	
Age of Menarche									
<14 years	9	6	0.13	7	8	1.29	7	8	2.53#
>14 years	8	7	df=1	4	11	df=1	3	12	df=1
Regularity of Menstruation									
Regular	3	5	1.63#	5	3	2.34#	4	4	1.33#
Irregular	14	8	df=1	7	15	df=1	6	16	df=1
Duration of Menstrual Cycle									
< 30 days	3	5	1.63#	5	3	2.34#	4	4	1.33#
> 30 days	14	8	df=1	7	15	df=1	6	16	df=1
Duration of Menstrual flow									
< 5 days	6	7	1.03	6	7	0.36	5	8	0.27
> 5 days	11	6	df=1	6	11	df=1	5	12	df=1
Experience of Dysmenorrhea									
Yes	11	8	0.03	7	12	0.21	6	15	0.2#
No	6	5	df=1	5	6	df=1	4	5	df=1

 # Yates correlated value

The table 13 represented that there was no significant association between the selected menstrual variables and level of practice. Hence the null hypothesis $H_0$4 stated that there will be no significant association between the menstrual variables and the level of knowledge practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls was retained.

Table.14

Correlation between Knowledge and Practice of Menstrual Hygiene and Management of Minor Ailments of Menstruation in Experimental Group of Visually Challenged Girls

N=30

Variables	Pretest			Posttest- I			Posttest- II		
	Mean	**SD**	**r**	**Mean**	**SD**	**r**	**Mean**	**SD**	**r**
Knowledge	9.73	1.59	**0.20**	18.13	1.45	**0.24**	18	1.34	**0.25**
Practice	5.31	1.48		13.4	0.48		13.13	2.36	

Table 14 depicts that a low positive correlation (0.24) between knowledge and practice of menstrual hygiene and management of minor ailments of menstruation in pretest, posttest I and posttest II (r= 0.20, r=0.24, r=0.25) respectively in the experimental group of visually challenged girls. Hence the null hypothesis $H_0$5 stated that there will be no significant correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in pretest and posttest of experimental group of visually challenged girls was rejected.

Summary

This chapter has dealt with the analysis and interpretation of the data obtained by the researcher. The analysis of the results showed that knowledge and practice was better in experimental group than the control group in posttest. This can be credited to the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation upon knowledge and practice among visually challenged girls.

CHAPTER V

DISCUSSION

Statement of the Problem

An experimental study to assess the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation upon knowledge and practice among visually challenged girls in selected schools, Chennai.

Objectives of the Study

1. To assess the level of knowledge and practice upon menstrual hygiene and management of minor ailments of menstruation among control and experimental group of visually challenged girls.
2. To determine the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation by comparing the pretest and posttest knowledge and practice among control and experimental group of visually challenged girls.
3. To assess the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation among experimental group of visually challenged girls.
4. To associate the pretest and posttest of knowledge and practice on menstrual hygiene and management of minor ailments of menstruation with selected demographic variables and menstrual variables of experimental group of visually challenged girls.
5. To find out the correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in control and experimental group of visually challenged girls.

The conceptual framework of present study was based on Modified Herzberg motivation theory (1959). The study variables were the audio drama, knowledge and practice of menstrual hygiene and management of minor ailments of menstruation among visually challenged girls. The null hypotheses were formulated for the study.

An extensive review of literature and guidance by the experts laid the foundation for the development of demographic variable proforma, menstrual variable proforma, Braille structured questionnaire on knowledge of menstrual hygiene and management of minor ailments of menstruation, Non observational check list on practice of menstrual hygiene and rating scale on the level of satisfaction of the audio drama on menstrual hygiene and management of minor ailments of menstruation.The data collection tools were validated and reliability was established. After confirming the feasibility through the pilot study, the data for the main study was collected. The collected data was tabulated and analyzed using appropriate descriptive and inferential statistics.

A true experimental study was conducted to achieve the objectives of the study. The present study was conducted in Little Flower Convent Hr.Sec. School for Visually Impaired in Nungambakkam, Chennai. The study samples were visually challenged girls who were selected through total enumerative sampling.

The level of knowledge and practice of the menstrual hygiene and management of minor ailments of menstruation was assessed for the control and experimental group of visually challenged girls. Audio drama on menstrual hygiene and management of minor ailments of menstruation was given to experimental group for 3 times at the interval of one day. The level of knowledge and practice on the menstrual hygiene and management of minor ailments of menstruation was assessed for two consecutive periods for students at 7^{th} day and

an interval of one month after audio drama. The level of satisfaction on Audio drama on menstrual hygiene and management of minor ailments of menstruation was rated one month after intervention. The data was analyzed using descriptive statistics such as mean and standard deviation and inferential statistics such as paired and unpaired t-test, Chi- square test and Karl Pearson's coefficient correlation test.

Demographic Variables of Visually Challenged Girls

Majority of the visually challenged girls were 14 years old (56.67 %, 60 %) and Hindus (63.33 %, 60 %). Half of them were studying 8^{th} std and half of them were studying 9^{th} std (50 %, 50 %), all of them were residing in urban area (100 %, 100 %) and the majority of visually challenged girls have family monthly income was above 10000 (83.33%, 76.67 %). in control and experimental group respectively. there was no significant difference between control and experimental group with regard to demographic variables, indicating the homogeneity of the groups respectively.

Menstruation is a normal physiological process to the females but sometimes it is considered as unclean phenomenon in the society. To compare the perceptions of different aspects of menstrual hygiene between adolescent girls of rural and urban area, a community-based cross-sectional study was conducted in urban and rural area of West Bengal among 541 adolescent school girls in the age group of 13–18 years. Data were collected by the predesigned and pretested questionnaires. Only 37.52% girls were aware of menstruation prior to attainment of menarche. The difference in the awareness regarding menstruation in urban and rural area was highly significant. Only 36% girls in the urban and 54.88% girls in the rural area used homemade sanitary pads and reused the same in the subsequent period. Satisfactory Cleaning of external genitalia was practiced by only 47.63% of the urban and

37.96% of the rural girls. This study found differences in hygienic practices followed by adolescent girls in urban and rural area. Hygienic practices during menstruation were unsatisfactory in the rural area as compared to the urban area. (Paria, 2014).

So dynamically the investigator recommended that rural girls needed more awareness on menstrual hygiene practice to reduce the prevalence of gynaecological problems among them.

Menstrual Variables of Visually Challenged Girls

Menstrual Variables reveals that half of the students of visually challenged girls was attained menarche between the age of 12-14 years (50 %, 50 %) and half of the students was attained menarche between the age of 15-16 years (50 %, 50 %). All of them had a previous knowledge about menstruation (100%, 100%) and the source of information was their parents (100%, 100%), most of the students had irregular menstruation (76.67%, 73.33 %), and their duration of menstrual cycle was above 30 days (76.67%, 73.33 %), less than half of the students had between 5-7days menstrual flow (46.67%, 43.33%), All of them had minor disorders during menstruation (100%, 100%), Most of them had the experience of dysmenorrhea (63.33%, 63.33%) and back pain (70%, 63.33%) in control and experimental groups respectively. There was no significant difference between control and experimental group with regard to clinical variables, indicating the homogeneity of the groups respectively.

The findings of source of information through the parents can also be compared with the epidemiologic study was undertaken using cross-sectional study method among 60 school-going adolescent girls' aged 13-16 years at Karad taluka by Mulik et al. (2015) to assess the attitude and practice regarding reproductive health. The results of this study was maximum

participants were aware about menstruation prior to menarche, and mothers were the main source of information for them. Majority 58 (96.66%) of adolescent girls feels menstruation is good for health as well as using sanitary pads during menstruation period as menstrual absorbent.

The first objective was to assess the level of knowledge and practice upon menstrual hygiene and management of minor ailments of menstruation among control and experimental group of visually challenged girls

Study findings revealed that around half of them had moderate knowledge (53.33, 46.67%) and half of them had inadequate knowledge (46.67, 53.33%) in pretest in control and experimental group of students. However, in the experimental group, most of the students had moderate knowledge (70%) and 30 % had adequate knowledge in posttest I and had moderate (76.67%) and adequate knowledge (23.33%) in posttest II after audio drama.

The present study findings revealed that majority of them had poor menstrual hygiene practice (63.33, 57.67%) before audio drama in the control and the experimental groups. Whereas in the experimental group all the students showed good menstrual hygiene practice in posttest I (100%) and posttest II (100%).

Similar findings are also reported in other studies conducted by Chaste (2007) and Suja (2008). Chaste (2007) conducted a study to assess the effect of planned teaching programme on menstrual hygiene of female inmates of a selected jail in Mumbai. A study design is one group pretest posttest design and data were collected using self-reporting technique. The study finding shows that 30% of them had knowledge about anatomy and physiology, menstrual cycle and menstrual hygiene in pretest and 86% in posttest

respectively. So there is a need to educate women with knowledge regarding safe, hygienic practices to enable them to lead a healthy reproductive life.

Suja (2008) conducted a study to assess the practice and problem in using pad or cloth during menstruation among the blind school children at Salem. The sample were collected in simple random method interview schedule consist of 31 items were developed. The finding shows that the problem was more among the samples using cloth ($p<0.05$) during menstruation.

The second objective was to determine the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation by comparing the pretest and posttest knowledge and practice among control and experimental group of visually challenged girls

Corresponding hypothesis was $H_0$1"There will be no significant difference between pretest and posttest level of knowledge before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" and $H_0$2 "There will be no significant difference in pretest and posttest level of practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls".

In this study the difference in mean and standard deviation of knowledge in control group between pretest vs posttest I (M=9.83, 9.77 SD=1.54,1.52), pretest vs posttest II (M=9.83, 9.77 SD=1.54,1.52) and posttest I vs posttest II (M=9.77, 9.77 SD=1.52,1.52) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation of knowledge between pretest vs posttest I (M=9.73, 18.13 SD=1.59, 1.45)

and pretest vs posttest II (M=9.73, 18 SD=1.59, 1.34) was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 1$ was rejected. When the posttest I and posttest II (M=18.13,18 SD=1.45, 1.34) were compared in the experimental group, there was no statistically significant difference indicating the retention of knowledge even after the interval of one month.

The difference in mean and standard deviation of practice in the control group between pretest vs posttest I (M=5.3, 5.4 SD= 1.0, 1.1), pretest vs posttest II (M=5.3, 5.4 SD= 1.0, 1.1) and posttest I vs posttest II (M=5.4, 5.4 SD= 1.1, 1.1) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation between pretest vs posttest I (M=5.31, 13.4 SD= 1.03, 0.48) and pretest vs posttest II (M=5.31, 13.13 SD= 1.03, 2.36) was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 2$ was rejected. When the posttest I and posttest II (M=13.4, 13.13 SD= 0.48, 2.36) were compared in the experimental group, there was no statistically significant difference indicating the retention of practice level even after the interval of one month.

The study findings revealed that the mean score of pretest level of knowledge had no difference between control and experimental group. In posttest I and II, the knowledge of experimental group had higher mean score (M=18.13, 18) in comparison with the control group (M= 9.77, 9.77). The difference was statistically significant ($p<0.001$). Hence the null hypothesis $H_0 1$ was rejected.

The findings of the study explained that the pretest practice of control and experimental group had no difference in mean score. In posttest I and II, the practice of experimental group had higher mean score (M=13.4, 13.13) in comparison with the control

group (M= 5.4, 5.4). The difference was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 2$ was rejected.

Educational interventions on menstruation and puberty have emerged as an important element of efforts to improve girls' knowledge and confidence related to puberty, menstruation, and menstrual hygiene management (MHM). The investigator findings were trustworthy with the study conducted by Sarah et al. (2017) who conducted a mixed-methods evaluation through cluster-randomized approach among 636 girls in two rural districts of the West Shewa Zone of Oromia, Ethiopia. Qualitative evidence underscored a strong interest in interventions that present information on menstruation and puberty in accurate and supportive terms. Consistent with an ecological framework for adolescent health, we conclude that puberty education intervention offer a useful individual level intervention.

The quasi experimental research study was conducted by Beena (2016) to assess the effect of Instructional programme on knowledge of adolescent girls regarding reproductive health. Data were collected from adolescent girls and multi stage cluster sampling technique was used to select samples. The researcher developed an Instructional programme (video assisted) with a self-administered teaching module on knowledge regarding reproductive health. A significant difference between mean pretest - post test score was found ($p< 0.001$). The findings of the study revealed that there was significant increase in knowledge of adolescent girls regarding reproductive health. Hence it is concluded that the Instructional programme is effective in improving knowledge of adolescent girls regarding reproductive health.

The third objective was to assess the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation among experimental group of visually challenged girls

The investigator found that the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation shows that 80% were satisfied and 20% were highly satisfied with the researcher and audio drama on menstruation and management of minor ailments of menstruation among visually challenged girls. The finding indicated as harmless, compact and economic and also very easy to follow. The above findings give a clear picture that everyone can benefit through audio drama method.

The fourth objective was to associate the pretest and posttest of knowledge and practice on menstrual hygiene and management of minor ailments of menstruation with selected demographic variables and menstrual variables of experimental group of visually challenged girls

Corresponding hypothesis was $H_0$3"There will be no significant association between demographic variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" and $H_0$4 "There will be no significant association between menstrual variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls".

The study findings indicate that there was no significant association between the selected demographic variables and level of knowledge in visually challenged girls. Findings

of the study also denotes that there was no significant association between the selected demographic variables and level of practice in visually challenged girls. Hence the null hypothesis $H_0$3 was retained.

The study findings observed that there was no significant association between the selected menstrual variables and level of knowledge. Also the findings represented that there was no significant association between the selected menstrual variables and level of practice. Hence the null hypothesis $H_0$4 was retained.

Insignificant association present in this study may be due to small sample size. The study findings are contradicting to the study conducted by Mishra et al. (2016) based on a sample of 715 adolescent girls from rural (325) and urban (390) areas of West Bengal, in Eastern India. Urban girls have better menstrual hygiene practices (β=0.343, $p<0.01$) than rural girls. A similar trend is noted for gynaecological problems (β=0.080, $p<0.01$) among the study participants. The results of path analysis also indicate that girls of higher socioeconomic status have better menstrual hygiene practices which subsequently reduce the prevalence of gynaecological problems among them.

Garg, Goyal & Gupta (2012) conducted study on India moves towards menstrual hygiene: subsidized sanitary napkins for rural adolescent girls-issues and challenges. The current article says that in 2010 the Government of India proposed a new scheme towards menstrual hygiene by a provision of subsidized sanitary napkins to rural adolescent girls. But there are various other issues like awareness, availability and quality of napkins, regular supply, privacy, water supply, disposal of napkins, reproductive health education and family support which needs simultaneous attention for promotion of menstrual hygiene.

The fifth objective was to find out the correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in the experimental group of visually challenged girls.

The findings depict that a low positive correlation (0.24) between knowledge and practice of menstrual hygiene and management of minor ailments of menstruation in pretest, posttest I and posttest II (r= 0.20, r=0.24, r=0.25) respectively in the experimental group of visually challenged girls. Hence the null hypothesis $H_0$5 stated that there will be no significant correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in pretest and posttest of experimental group of visually challenged girls was rejected.

School based cross- sectional study was conducted by Ray (2014) among high school girl students at Western Ethiopia. To collect data self-administered questionnaires were employed, six girls with high- school education were recruited as data collectors. As to the data obtained, out of the total respondents (980) 330 (39.9 %) of the respondents only had good practice on menstrual hygiene. Awareness regarding the need for information about good menstrual practices is very important. Therefore, policy makers and stakeholders should setup health education program to create awareness and practice of good menstrual hygiene.

Punitha (2010) conducted study to assess the practice and problem in using pad or cloth during menstruation among 100 blind school children. Structure interview questionnaire used for validate the responses. In that there was a significant negative correlation between practice and problem of using cloth during menstruation r = -0.139 ($p<0.05$). There was a high significant correlation between the practice and problem while using pad during menstruation in relation to prolonged menstrual flow r = 0.874 (p = 0.043). When the

menstrual hygienic practice is less, the problem will be more. Therefore, blind children need adequate education and suitable assistance to use sanitary materials to prevent problems among blind school children.

Summary

This chapter dealt with the discussion of findings in the present study which includes demographic variable, menstrual variable, level of satisfaction and effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation and correlation between knowledge and practice of menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This is the most creative and demanding part of the study. This chapter gives a brief account of the present study including conclusion drawn from the finding, recommendations, limitations of the study, suggestions for the study and nursing implications.

Summary

The aim of the study is to assess the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation upon knowledge and practice among visually challenged girls.

Objectives of the Study

1. To assess the level of knowledge and practice upon menstrual hygiene and management of minor ailments of menstruation among control and experimental group of visually challenged girls.
2. To determine the effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation by comparing the pretest and posttest knowledge and practice among control and experimental group of visually challenged girls.
3. To assess the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation among experimental group of visually challenged girls.
4. To associate the pretest and posttest of knowledge and practice on menstrual hygiene and management of minor ailments of menstruation with selected demographic variables and menstrual variables of experimental group of visually challenged girls.

5. To find out the correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls.

The study was carried out upon 60 students of visually challenged girls from Little Flower Convent Hr.Sec. School for Visually Impaired at Chennai. The knowledge and practice was assessed before and after audio drama on menstrual hygiene and management of minor ailments of menstruation by using structured questionnaire and non-observational check list. The observation was done for 2 consecutive periods for each student. Then the level of satisfaction of visually challenged girls was assessed using rating scale.

Null Hypothesis

$H_0$1: There will be no significant difference between pretest and posttest level of knowledge before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$2: There will be no significant difference in pretest and posttest level of practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$3: There will be no significant association between demographic variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$4: There will be no significant association between menstrual variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls.

$H_0$5: There will be no significant correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in pretest and posttest of experimental group of visually challenged girls.

The conceptual framework of present study was based on the Modified Herzberg Motivation Theory (1959). An extensive review of literature and guidance by the experts laid the foundation for the development of tool. A true experimental study was used to achieve the objectives of the study. The researcher used the demographic variable proforma, menstrual variable proforma, Braille method structured questionnaire tools on knowledge, Non observational check list on practice of menstrual hygiene and rating scale on the satisfaction of the audio drama on menstrual hygiene and management of minor ailments of menstruation.

The data collection tools were validated and reliability was established. After confirming the feasibility through the pilot study, the data for the main study was collected. The collected data was tabulated and analyzed using appropriate descriptive and inferential statistics.

Major findings of the study

Demographic Variables of Visually Challenged Girls

Majority of the visually challenged girls were 14 years old (56.67 %, 60 %) and Hindus (63.33 %, 60 %). Half of them were studying 8^{th} std and half of them were studying

9th std (50 %, 50 %), all of them were residing in urban area (100 %, 100 %) and the majority of visually challenged girls have family monthly income was above 10000 (83.33%, 76.67 %). in control and experimental group respectively. there was no significant difference between control and experimental group with regard to demographic variables, indicating the homogeneity of the groups respectively.

Menstrual Variables of Visually Challenged Girls

Menstrual Variables reveals that half of the students of visually challenged girls was attained menarche between the age of 12-14 years (50 %, 50 %) and half of the students was attained menarche between the age of 15-16 years (50 %, 50 %). All of them had a previous knowledge about menstruation (100%, 100%) and the source of information was their parents (100%, 100%), most of the students had irregular menstruation (76.67%, 73.33 %), and their duration of menstrual cycle was above 30 days (76.67%, 73.33 %), less than half of the students had between 5-7days menstrual flow (46.67%, 43.33%), All of them had minor disorders during menstruation (100%, 100%), Most of them had the experience of dysmenorrhea (63.33%, 63.33%) and back pain (70%, 63.33%) in control and experimental groups respectively. There was no significant difference between control and experimental group with regard to clinical variables, indicating the homogeneity of the groups respectively.

Level of knowledge and practice upon menstrual hygiene and management of minor ailments of menstruation among control and experimental group of visually challenged girls

Study findings revealed that around half of them had moderate knowledge (53.33, 46.67%) and half of them had inadequate knowledge (46.67, 53.33%) in pretest in control and

experimental group of students. However, in the experimental group, most of the students had moderate knowledge (70%) and 30 % had adequate knowledge in posttest I and had moderate (76.67%) and adequate knowledge (23.33%) in posttest II after audio drama.

The present study findings revealed that majority of them had poor menstrual hygiene practice (63.33, 57.67%) before audio drama in the control and the experimental groups. Whereas in the experimental group all the students showed good menstrual hygiene practice in posttest I (100%) and posttest II (100%).

Effectiveness of audio drama on menstrual hygiene and management of minor ailments of menstruation before and after audio drama among control and experimental group of visually challenged girls

In this study the difference in mean and standard deviation of knowledge in control group between pretest vs posttest I (M=9.83, 9.77 SD=1.54,1.52), pretest vs posttest II (M=9.83, 9.77 SD=1.54,1.52) and posttest I vs posttest II (M=9.77, 9.77 SD=1.52,1.52) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation of knowledge between pretest vs posttest I (M=9.73, 18.13 SD=1.59, 1.45) and pretest vs posttest II (M=9.73, 18 SD=1.59, 1.34) was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 1$ "There will be no significant difference between pretest and posttest level of knowledge before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" was rejected. When the posttest I and posttest II (M=18.13,18 SD=1.45, 1.34) were compared in the experimental group, there was no statistically significant difference indicating the retention of knowledge even after the interval of one month.

The difference in mean and standard deviation of practice in the control group between pretest vs posttest I (M=5.3, 5.4 SD= 1.0, 1.1), pretest vs posttest II (M=5.3, 5.4 SD= 1.0, 1.1) and posttest I vs posttest II (M=5.4, 5.4 SD= 1.1, 1.1) was not statistically significant, whereas in the experimental group the difference in mean and standard deviation between pretest vs posttest I (M=5.31, 13.4 SD= 1.03, 0.48) and pretest vs posttest II (M=5.31, 13.13 SD= 1.03, 2.36) was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 2$ "There will be no significant difference in pretest and posttest level of practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" was rejected. When the posttest I and posttest II (M=13.4, 13.13 SD= 0.48, 2.36) were compared in the experimental group, there was no statistically significant difference indicating the retention of practice level even after the interval of one month.

The study findings revealed that the mean score of pretest level of knowledge had no difference between control and experimental group of visually challenged girls. In posttest I and II, the knowledge of experimental group had higher mean score (M=18.13, 18) in comparison with the control group (M= 9.77, 9.77). The difference was statistically significant ($p<0.001$). Hence the null hypothesis $H_0 1$ was rejected.

The findings of the study explained that the pretest practice of control and experimental group had no difference in mean score. In posttest I and II, the practice of experimental group had higher mean score (M=13.4, 13.13) in comparison with the control group (M= 5.4, 5.4). The difference was statistically significant at $p<0.001$ level. Hence the null hypothesis $H_0 2$ was rejected.

Level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation among experimental group of visually challenged girls

The investigator found that the level of satisfaction on audio drama on menstrual hygiene and management of minor ailments of menstruation shows that 80% were satisfied and 20% were highly satisfied with the researcher and audio drama on menstruation and management of minor ailments of menstruation among visually challenged girls. The finding indicated as harmless, compact and economic and also very easy to follow. The above findings give a clear picture that everyone can benefit through audio drama method.

Association between selected demographic variables and knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls

The study findings indicate that there was no significant association between the selected demographic variables and level of knowledge and practice among visually challenged girls. Hence the null hypothesis $H_0$3 "There will be no significant association between demographic variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls" was retained.

Association between selected menstrual variables and knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in experimental group of visually challenged girls

The study findings observed that there was no significant association between the selected menstrual variables and level of knowledge and practice. Hence the null hypothesis

$H_0$4 “There will be no significant association between menstrual variables and the level of knowledge and practice before and after audio drama on menstrual hygiene and management of minor ailments of menstruation among visually challenged girls” was retained.

Correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation

The findings depict that a low positive correlation (0.24) between knowledge and practice of menstrual hygiene and management of minor ailments of menstruation in pretest, posttest I and posttest II (r= 0.20, r=0.24, r=0.25) respectively in the experimental group of visually challenged girls. Hence the null hypothesis $H_0$5 stated that there will be no significant correlation between knowledge and practice on menstrual hygiene and management of minor ailments of menstruation in pretest and posttest of experimental group of visually challenged girls was rejected.

Conclusion

The findings of the study revealed that the knowledge and practice outcome is better in experimental group of visually challenged girls. Thus, study concludes that audio drama is one of the best method for visually challenged girls to obtain a good knowledge and practice of menstrual hygiene and management of minor ailments of menstruation.

Implications

Researcher recommends the implications on nursing practice, nursing administration, nursing education, nursing research.

Nursing Practice

The findings of the study revealed that the visually challenged girls in school are in need of adequate support. The audio drama on menstrual hygiene and management of minor

ailments of menstruation is found to have better outcome. The best effective strategies are repeating the audio drama to the students, checking the practice of visually challenged girls and providing the hygienic instructions before and after audio drama will increase the knowledge and practice level. The above mentioned strategies can be followed to make the audio drama effective. All nurses play a vital role in caring the visually challenged girls. Strategies and teaching methods can be formed for the nurses to create awareness among visually challenged girls.

Nursing Education

The emerging newer trends in the field of nursing education focus on the innovations to enhance the teaching methods. The nursing students should be taught the various techniques of teaching methods. Therefore, student nurses should be taught the importance of audio drama for promoting knowledge and practice of the visually challenged girls. Demonstration of proper technique and use of audio drama in the community setup helps the students to acquire an adequate knowledge and incorporate it in their practice.

Nursing Administration

Technological advancement and ever growing challenges of health care have increased the responsibility of administrators to provide education, opportunities to understand the intervention in improving the knowledge and practice of menstrual hygiene.

This enables the nurses to update the knowledge and to render the cost effective care to the public. The nurse administrators can train the nurses to identify the best method. Nurse administrators must periodically organize formal training programme to the nurses for the providing care to the visually challenged peoples. Awareness can be created among the nurses

and student nurses regarding the benefits of audio drama in order to promote its use in community set up.

Nursing Research

The professionals and the students can conduct further studies on knowledge and practice of menstrual hygiene with various interventions. There is a need for extensive research in this area. Nurse researcher should appraise challenges and should perform scientific work by taking part in assessment, applications, evaluation for menstrual hygiene practice among visually challenged girls. The researcher can bring the researched technique into practice. Researchers must focus on various measures in maintaining menstrual hygiene and develop appropriate protocol for hygienic practice during menstruation and thus minimizing the complication. Continuous practice can be implemented to visually challenged girls to attain a better outcome.

Recommendations

- A study can be conducted to assess the prevalence of reproductive tract infection in visually challenged girls.
- A comparative study can be done between urban and rural visually challenged girls about menstrual hygiene practices.
- The study can be conducted in the other age group with visual impairment.
- The study can be conducted in the other settings like schools, SOS village etc.

Limitations

- The study findings cannot be generalized due to small sample size.
- Setting was selected based on convenience of the researcher.

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APPENDIX XVI
MASTER CODE SHEET – CONTROL GROUP

DEMOGRAPHIC VARIABLE						CLINICAL VARIABLE									KNOWLEDGE LEVEL			PRACTICE LEVEL		
S.NO	AG	RL	ED	MI	RES	AM	KM	SI	RM	DC	DM	PM	MD	DS	PRT	POT - I	POT - II	PRT	POT - I	POT - II
1	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.3	9	9	9	6	7	7
2	1.1	2.3	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	11	12	12	5	4	4
3	1.1	2.2	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	8	8	8	5	6	6
4	1.2	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.3	10	12	12	4	4	4
5	1.1	2.2	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	10	8	8	7	6	6
6	1.2	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	9	12	12	5	7	7
7	1.2	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	12	8	8	5	6	6
8	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.1	8	10	10	5	4	4
9	1.1	2.2	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	12	10	10	6	6	6
10	1.2	2.3	3.1	4.3	5.1	1.2	2.1	3.1	4.2	5.3	6.4	7.1	8.1	9.1	8	9	9	4	4	4
11	1.2	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	10	10	10	6	6	6
12	1.2	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	10	10	10	5	4	4
13	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	9	10	10	5	4	4
14	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.1	12	9	9	4	4	4
15	1.1	2.3	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	8	12	12	7	7	7
16	1.1	2.2	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	10	8	8	4	6	6
17	1.2	2.1	3.2	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.1	9	10	10	5	4	4
18	1.2	2.3	3.2	4.3	5.1	1.2	2.1	3.1	4.2	5.3	6.4	7.1	8.1	9.1	12	9	9	5	6	6
19	1.1	2.1	3.2	4.3	5.1	1.2	2.1	3.1	4.2	5.2	6.2	7.1	8.1	9.3	8	8	8	5	4	4
20	1.1	2.2	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.3	12	12	12	5	6	6
21	1.2	2.1	3.2	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	8	8	8	6	6	6
22	1.2	2.1	3.2	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.3	10	10	10	5	7	7
23	1.1	2.1	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.2	9	12	12	7	6	6
24	1.1	2.1	3.2	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.1	12	8	8	4	4	4
25	1.1	2.1	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.1	8	12	12	6	6	6
26	1.1	2.1	3.2	4.3	5.1	1.2	2.1	3.1	4.1	5.2	6.2	7.1	8.1	9.1	12	8	8	4	6	6
27	1.1	2.2	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	10	10	10	7	6	6
28	1.2	2.3	3.2	4.3	5.1	1.2	2.1	3.1	4.2	5.3	6.4	7.1	8.1	9.1	9	9	9	4	6	6
29	1.2	2.1	3.2	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	12	12	12	7	6	6
30	1.2	2.1	3.2	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	8	8	8	6	4	4

MASTER CODE SHEET – EXPERIMENTAL GROUP

DEMOGRAPHIC VARIABLE						CLINICAL VARIABLE									KNOWLEDGE LEVEL			PRACTICE LEVEL		
S.NO	AG	RL	ED	MI	RES	AM	KM	SI	RM	DC	DM	PM	MD	DS	PRT	POT - I	POT - II	PRT	POT - I	POT - II
1	1.1	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	9	20	20	5	14	13
2	1.2	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	11	17	18	6	13	14
3	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	8	20	18	4	13	8
4	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.3	10	18	17	6	14	14
5	1.1	2.3	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	9	17	17	5	13	13
6	1.1	2.2	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	12	20	17	6	13	13
7	1.2	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.2	8	17	20	4	14	14
8	1.2	2.3	3.1	4.3	5.1	1.2	2.1	3.1	4.2	5.3	6.4	7.1	8.1	9.1	12	20	20	5	14	14
9	1.1	2.1	3.1	4,3	5.1	1.2	2.1	3.1	4.1	5.2	6.2	7.1	8.1	9.1	10	18	18	6	13	13
10	1.1	2.2	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	12	14	14	5	13	13
11	1.2	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	8	17	17	8	13	13
12	1.2	2.1	3.1	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	12	20	20	5	14	13
13	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	8	18	18	6	14	13
14	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.3	10	18	18	4	13	14
15	1.1	2.1	3.1	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	9	17	17	4	13	14
16	1.1	2.1	3.2	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.3	12	20	20	6	14	13
17	1.1	2.3	3.2	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	8	18	18	5	13	13
18	1.1	2.2	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	9	18	18	6	13	14
19	1.2	2.1	3.2	4.4	5.1	1.1	2.1	3.1	4.1	5.2	6.2	7.2	8.1	9.2	12	17	17	4	13	13
20	1.2	2.3	3.2	4.3	5.1	1.2	2.1	3.1	4.2	5.3	6.4	7.1	8.1	9.1	8	17	17	5	14	13
21	1.1	2.1	3.2	4.3	5.1	1.2	2.1	3.1	4.1	5.2	6.2	7.1	8.1	9.1	10	20	18	7	14	13
22	1.1	2.2	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	9	20	20	6	13	13
23	1.2	2.3	3.2	4.3	5.1	1.2	2.1	3.1	4.2	5.3	6.4	7.1	8.1	9.1	9	18	18	5	13	13
24	1.1	2.1	3.2	4.3	5.1	1.2	2.1	3.1	4.1	5.2	6.2	7.1	8.1	9.1	12	18	18	7	14	14
25	1.1	2.2	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	8	17	17	4	13	14
26	1.2	2.1	3.2	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	10	20	20	5	13	13
27	1.2	2.1	3.2	4.4	5.1	1.2	2.1	3.1	4.2	5.3	6.2	7.1	8.1	9.1	9	18	18	6	13	13
28	1.1	2.1	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.2	8.1	9.3	8	18	18	4	14	13
29	1.1	2.2	3.2	4.4	5.1	1.1	2.1	3.1	4.2	5.3	6.3	7.1	8.1	9.1	8	17	17	5	14	13
30	1.2	2.3	3.2	4.3	5.1	1.2	2.1	3.1	4.2	5.3	6.4	7.1	8.1	9.1	12	17	17	7	13	13

APPENDIX XVII

PHOTOGRAPHS DURING THE STUDY